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ABSTRACT

In order to provide linking agent trainers with some assistance in the area of personnel and training assessment, a search for suitable instruments was undertaken. This compendium and the attached instrumentation are the results of this search. Very few instruments were found that focus directly or linking agent assessment. With few exceptions, most of the instruments were designed for specific, often one-time, purposes. Linking agent assessment is primitive. Would-be users of assessment instruments should not expect to find much that is immediately usable here. Still, some of the available instruments can be adapted to fit linking agent training situations. Before the instruments are examined, the types of uses and methods that could be employed in linking agent assessment are reviewed. The instruments included are Baker's School Counselor Attitudes Inventory; Davis's Linker Performance Inventory; Creighton's Professional Preference Census; Hood's and Blackwell's Development, Dissemination, and Evaluation Diagnostic Instrument; and the American Society for Training and Development questionnaire "What Do Training and Development Professionals Really Do?" (Author/IRT)

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ASSESSMENT INSTRUMENTS FOR EDUCATIONAL LINKING AGENT TRAINING: A PRELIMINARY COMPENDIUM

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July 1978

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PREFACE

The National Institute of Education is committed to building knowledge of the processes and structures involved in improving educational practice. In line with these objectives, the Institute initiated a collaborative effort involving nine federally-supported educational laboratories and research and development centers that had maintained R&D activities concerned with providing change support to the staffs of schools attempting to improve educational practice. R&D Centers include those at the University of California at Los Angeles, the University of Oregon, Stanford University, the University of Texas, and the University of Wisconsin. Also cooperating were the Far West Laboratory for Educational Research and Development, the Northwest Regional Educational Laboratory, Research for Better Schools, and the Southwest Regional Educational Laboratory.

This compendium of assessment instruments for linking agent training is a small part of this larger cooperative effort to organize knowledge and resources to support educational change agents. Related compendia of linking agent support resources include Educational Dissemination and Linking Agent Sourcebook: A Collection of Product Resources and Career Development Opportunities for Educational Linking Agents: A Guidebook to Preliminary Planning and Locating Resources.

When work on this compendium was initiated, there was the expectation that a substantial number of instruments might be found. This did not prove to be true. In fact, only a baker's dozen could be located that were reasonably relevant to assessment for educational linking agent training. All involve some form of rating (rather than knowledge or performance testing) and the majority fail to provide documentation meeting standards for educational and psychological tests. If a more exhaustive search were undertaken we have no doubt that other pertinent instruments could be found. However, we doubt that the overall scope or quality of the collection would be improved significantly. The critical user who is committed to high standards for test development and documentation will find scant satisfaction in the quality of this collection. With a few exceptions, users will need to develop their own data on reliability and validity.

This compendium does offer some help for those that are looking for assessment instruments, but that help may be more in the form of methods or ideas about what others have done than in the identification of an instrument that directly fits a particular need.

INTRODUCTION

In the educational dissemination and change literature there is ample evidence that new ideas and practices are spread most efficiently and used with greatest effect when their dissemination and utilization is facilitated by a person or team of persons functioning as a linking agent who conveys knowledge from more distant sources toward ultimate users. The various conceptions of roles and functions of linking agents are discussed elsewhere (see Lippitt and Havelock, 1968; Havelock, 1969; Piele, 1975; Nash and Culbertson, 1977; Butler and Paisley, 1978; and Hood and Cates, 1978). Crandall (1977, p. 216) offers the following broad description that accommodates a range of particular roles:

> A _linking agent_ is an individual who helps others engage in problem-solving by connecting them to appropriate resources.

In a recent analysis, Hood and Cates (1978, pp. 81-84) noted that currently the great majority of educational linking agents are employed by short-term projects that often exist on year-to-year funding. Because there is no established conception of a profession for linking agents, there is no significant pool of trained linkers ready to step into new jobs. Hence, most educational dissemination or school improvement projects make do with whomever they can find. Typically, neither the proposal writer nor the sponsor tends to give high priority to training, scheduling of time to accomplish it, or allocating significant funds to support it. Finally, the need to begin promptly to accomplish project objectives and to deal quickly with pressing client demands becomes so urgent that training time is invariably difficult to schedule. The reality is that project managers must place major emphasis on selection, assignment, and initial job orientations, and then count heavily on on-the-job learning to make up the difference. Formal training, if any, is often confined to a few days a year.

These conditions may be temporary and largely due to the newness and ad hoc character of most educational dissemination efforts. But the problem of attempting to accomplish complex linkage functions with unskilled personnel is very real. Part of this problem lies in the fact that the educational linkage enterprise is too recent, ambitious, fragmented, and marginal (in terms of priorities, fiscal support, or numbers of linking agents performing similar roles) to have developed an adequate basis for understanding personnel requirements or for developing adequate selection, assignment, training, and support methods to meet these requirements. It is then perhaps no surprise that linking agent assessment is primitive and largely ad hoc.

In order to provide linking agent trainers with some assistance in the area of personnel and training assessments, a search for suitable instruments was undertaken. This compendium and the attached instrumentation are the results of this search effort. Over the past several months, two searches were commissioned. One was conducted by the San Mateo County Educational Resources Center (SMERC); the other by the ERIC Clearinghouse on Career Education through the direct assistance of the RDx Resource and Referral Service Director. These agencies were selected because, due to prior searches for linking agent training literature, their staff were especially well acquainted with the problems of locating documents in this area. Despite this familiarity, these searches led us to only a few dissertation studies (two were significant for this report) and a limited number of relevant instruments. In addition, we reviewed and included instruments made available by courtesy of the Northwest Regional Educational Laboratory Linker Training Service (LTS); the National Diffusion Network Technical Assistance Brokerage (TAB); and the NETWORK, Andover, MA.

We had originally expected to find a substantial number of suitable instruments and to produce a compendium that would provide a useful source for the selection of reliable instrumentation. However, this was not the case. Very few instruments were found which focus directly on linking agent assessment. With few exceptions, most of the instruments we found were designed for specific, often one-time, purposes (e.g., provide data for a dissertation, conduct a needs assessment, evaluate a training package). Documentation regarding instrument design, development, and validation is often scanty or non-existent. Apparently, this kind of documentation is too expensive for one-time users.

It is our conclusion that linking agent assessment is primitive. Would-be users of assessment instruments should not expect to find much that is immediately usable here. Still, some of the available instruments can be adapted to fit linking agent training situations; however, the content is limited and the psychometric quality is not high. Until more has been done to develop and validate instruments in this area, it is likely that potential users may often be as well off designing instruments to fit their own particular situations, as to attempt to find what they need among existing instruments.

Before examining the instruments contained in the compendium, it seems useful to review the types of uses and methods that could be employed.

USES OF LINKING AGENT ASSESSMENT INSTRUMENTS

Although our initial assignment was to search for instruments that could be used in connection with training of linking agents, we interpreted the assignment more broadly to include the entire area of personnel and training. However, we excluded instruments used by linking agents with client groups to accomplish problem-solving or assistance functions.*

The following are some of the potential uses of assessment instruments for personnel and training purposes:

- Identification of requirements for selection and training
- Selection (placement, assignments, promotion)
- Training (assessment of entry, progress, and exit competency)
- Research and Evaluation

Each of these areas of potential use are described below, along with a brief commentary of the use of instruments for that purpose in connection with education linking agents.

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* Crandall (1977, p. 248) provided a useful reference to this type of instrument which we repeat here:

> Among the most helpful sources which should be inspected by the interested reader are Diagnosing the Professional Climate of Schools by Fox et al. (1973), a series of instruments developed for use in the COPED Project and the series of checklists developed by Havelock to accompany A Guide to Innovation (available only in ERIC ED 056 256). A group of reference tools of immense utility to those with behavioral science orientation or inclination are the Annual Handbooks for Group Facilitators and Handbooks of Structured Experiences for Human Relations Training by Pfeiffer and Jones. There are now six volumes of the former and seven volumes of the latter. The Schmuck and Runkel Handbook of Organization Development in Schools (1972) is also a valuable source of diagnostic instruments. Lake and Miles, in their recent compendium Measuring Human Behavior (1973), bring together and review a vast array of instruments useful to change practitioners, as do Pfeiffer and Heslin in their Instrumentation in Human Relations Training (1973, 1976).

Identification of Requirements for Selection and Training

Systematic, documented efforts to gather and use empirical information to define requirements for selection and training of linking agents are rare. Apparently, these methods are unknown to many employers and trainers of linking agents. Several approaches have been pioneered by the personnel and training research staffs of the military services. These have included complete planning processes such as Instructional System Design (Department of the Air Force, 1970, 1973; Interservice Committee for Instructional Systems Development, 1975) which is an outgrowth of the earlier Qualitative and Quantitative Personnel Requirements Information (QPRI) system of the U.S. Air Force and the Systems Engineering Training of the U.S. Army (Department of the Army, 1972). More specific procedures for defining military job performance information by means of questionnaire surveys of workers in an occupation have been developed by Morsh, Madden, and Christal (1961), Morsh and Archer (1967), and Christal (1974).

Smith (1971), Moore (1976), and Ammerman and Pratzner (1977) provide useful sources that go beyond military applications. Although there are differences among the methods, they are mainly in terms of format and the kind and amount of auxiliary data collected. The common technique in task surveys involves two components: a comprehensive listing of tasks that comprise specific job activities that serve as the basic analytical unit of an occupation, and the use of job incumbents or those close to the actual work situation as the primary source of information.

The major steps in performing a task survey of linking agents would include:

1. Defining the scope of the linking agent positions that are to be studied.
2. Constructing comprehensive lists of job tasks that are performed in these positions.
3. Obtaining task data and ratings from linking agents, supervisors, and other knowledgeable persons.
4. Determining the job relevance of task for personnel selection, assignment, or instructional consideration.
5. Determining the performance level to which each task should be developed.
6. Formulating statements of terminal objectives for the purpose of communicating personnel and training requirements.

The possible uses of the results of job and task survey analysis are several, e.g.:

- To define the performance characteristics of an occupation (e.g., linking agents).
- To define performance characteristics that distinguish among job clusters (e.g., "resource finders" from "process helpers").
- To identify emerging or changing job structures (e.g., the "implementation agent").
- To provide separate descriptions of work performed by subgroups with different work backgrounds (e.g., information science versus education) or different work contexts (e.g., state versus local education agencies).
- To develop specifications for verifying the relevance of training program content.
- To select training content or materials that are most relevant to specific types or levels of linking agent performance.
- To compare different training programs in terms of common/different content and in terms of relevance for specific jobs or clusters.
- To identify critical task features that warrant special emphasis in training or assessment.
- To determine priorities for training by obtaining judgements concerning:
    - What tasks students can already perform, and at what levels of proficiency

- How important the task is for job success
- How many job incumbents must perform the task
- How often the task is performed
- How feasible it is to learn the task informally on the job

Critique of current instruments. Several of the linker training instruments described later were specifically developed to identify training needs. Generally, they consist of lists of tasks that are of variable but intermediate specificity. Some of the items appear to be subject to different interpretations as to level of knowledge or skill implied (e.g., identify the key people who should be involved in problem definition activity at a specific [school] site; conduct a brainstorming session; estimate realistic per-pupil costs of adopting an innovation; arrange, organize, and conduct workshops/meetings). Sometimes these lists are submitted to linking agents, but more frequently to their supervisors for rating on one or more scales (e.g., need for training, criticality for job effectiveness; frequency of performance). Because adequate documentation of the results of these ratings are virtually non-existent, there is little basis of critiquing the quality of results. However, it is our impression that items of the type illustrated above will be subject to great variability among raters, and are capable of producing only rough relative orderings among items in terms of the dimension related (e.g., training needs, criticality, frequency). Moreover, because most lists are composed of items derived from available literature or listings produced by others rather than from observation of or interviews with linking agents, there are risks that the lists are not sufficiently comprehensive to encompass fully the range of actual linking agent job requirements.

Selection (Placement, Assignment, Promotion)

In the previous section we considered assessment instruments in terms of their use to define selection or training requirements. Here we focus on selection itself. The distinction between selection and training is somewhat artificial, and even the joint concept of selection and training is sometimes interpreted in a limited way. It should be noted that performance can also be improved by changing the work situation (e.g., combining tasks to make them more interesting, providing manuals or other job aids to provide important job information, teaming persons with complementary knowledge or skills). Selection (as we are using the term here) implies not only initial selection, but selection to match the person with the potential employer (placement), selection to match the person with a specific job (assignment), or selection to advance the person to a more demanding job (promotion). David Crandall's discussion of training and supporting linking agents includes these comments:

> Selecting linking agents is not simple, whether an agency is choosing from among already existing staff or whether it is hiring new staff from the outside. Half of the battle is won or lost at the point of initial selection.
>
> ...Our experience has resulted in our being much more pessimistic about the possibility of training in the non-technical areas and verified the importance of selecting (vs. training) for certain personal and interpersonal attributes. (1977, p. 232)

Critique of current instruments. This critique is brief. We have found no instance involving the development or use of assessment instruments for any selection purpose relating to education linking agents. Currently, linking agent selection appears to be completely judgmental and is apparently based on review of previous job experience, recommendations made by others, employment interviews, and subsequent on-the-job appraisal by supervisors, peers, or clients. There is little evidence whether these appraisals are systematic, or whether they in fact touch on all important aspects of actual job requirements.

Given the recency of the existence of education linking agents, the very small numbers who work for any one employer, the apparent diversity of job requirements, and the absence of cooperation among linking agent employers to pool efforts to develop and validate assessment instruments, it seems unlikely that much will be done to change this situation.

Assessment instruments as part of training. When training is indicated (i.e., when persons with requisite competency cannot be found and where experience or judgment indicates that the knowledge, skills, or sensitivities can be taught), assessment can serve several purposes, including:

- diagnosis of entry-level competencies of students in relation to job requirements or student objectives;
- selection of specific content, difficulty levels, or instructional modalities matching student needs, interests, or learning styles;
- assessment of student progress, including recycling, remedial instruction, advancement, or enrichment; and
- assessment/certification of exit competence levels.

Because there is some agreement that individuals working as linking agents have come from diverse backgrounds (Sieber et al., 1972; Emrick and Peterson, 1977), a strong case can be made for the need for individualized training coupled with individualized assessment. Hood and Blackwell (1975) developed and validated a competence-based assessment method that was specifically designed to meet the needs for training of entry and advanced professionals in educational development, dissemination, and evaluation (DD&E). The DD&E Assessment System includes diagnostic, student progress, and exit certification features and employs ratings, paper and pencil knowledge tests, and miniature job task simulations. Portions of the DD&E Diagnostic Instrument (described later) deal specifically with product development and evaluation, and thus their content is of little use for linking agent training. Although only portions of the DD&E Diagnostic Instrument are directly usable for linking agent training, the DD&E Assessment System provides a relevant and usable model for developing and validating assessment instruments for individualized competence-based linking agent training programs.

Critique of current instruments. Only a few of the instruments we found appear to be designed for use in training. All involve some form of self-report or rating of training needed or achieved, or the student's appraisal of various aspects of the training experience. Aside from the DD&E Diagnostic Instrument, none of the instruments appear to have any validation data. One surprise is the absence of written tests of general job knowledge.* We conclude that knowledge testing is not yet a significant aspect in linker training. Instruments that exist appear to be used primarily to provide the student or the instructor with very general and largely subjective information concerning students needs or progress in training or to provide instructors with clues as to the relevance or adequacy of training content and methods.

Research and Evaluation

The potential uses of assessment instruments for research or evaluation in connection with linking agent training are so numerous that no effort will be made to list them. Rather, we briefly note the types of uses of the instruments found.

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* A number of curriculum-embedded knowledge tests that are specific to particular instructional modules exist. They are not included in this compendium because their use is highly limited. For examples of curriculum-embedded tests, see the following: Banathy, B.H., et al. The Educational Information Consultant: Skills in Disseminating Educational Information (Training Manual). San Francisco, CA: Far West Laboratory for Educational Research and Development, 1971; Mick, C. et al. Development of Training Resources for Educational Extension Service Personnel. Stanford, CA: Institute for Communication Research, and Santa Monica, CA: System Development Corporation, 1973 (ED 077 534; ED077 535; ED 077 536).

Several of the instruments reviewed below appear to have been developed primarily to accomplish some form of research or to have been used for the evaluation (validation) of other instruments or training programs. A particularly popular line of research effort is concerned with identifying the natural linkers or early adopters in various types of organizations. Although the research applications seem to be concerned with understanding the roles played by and the characteristics of individuals in communication or innovation diffusion processes, there are also potentially practical applications of these instruments for those who would design dissemination programs or capacity building efforts around identified natural innovators, linkers, or early adopters.

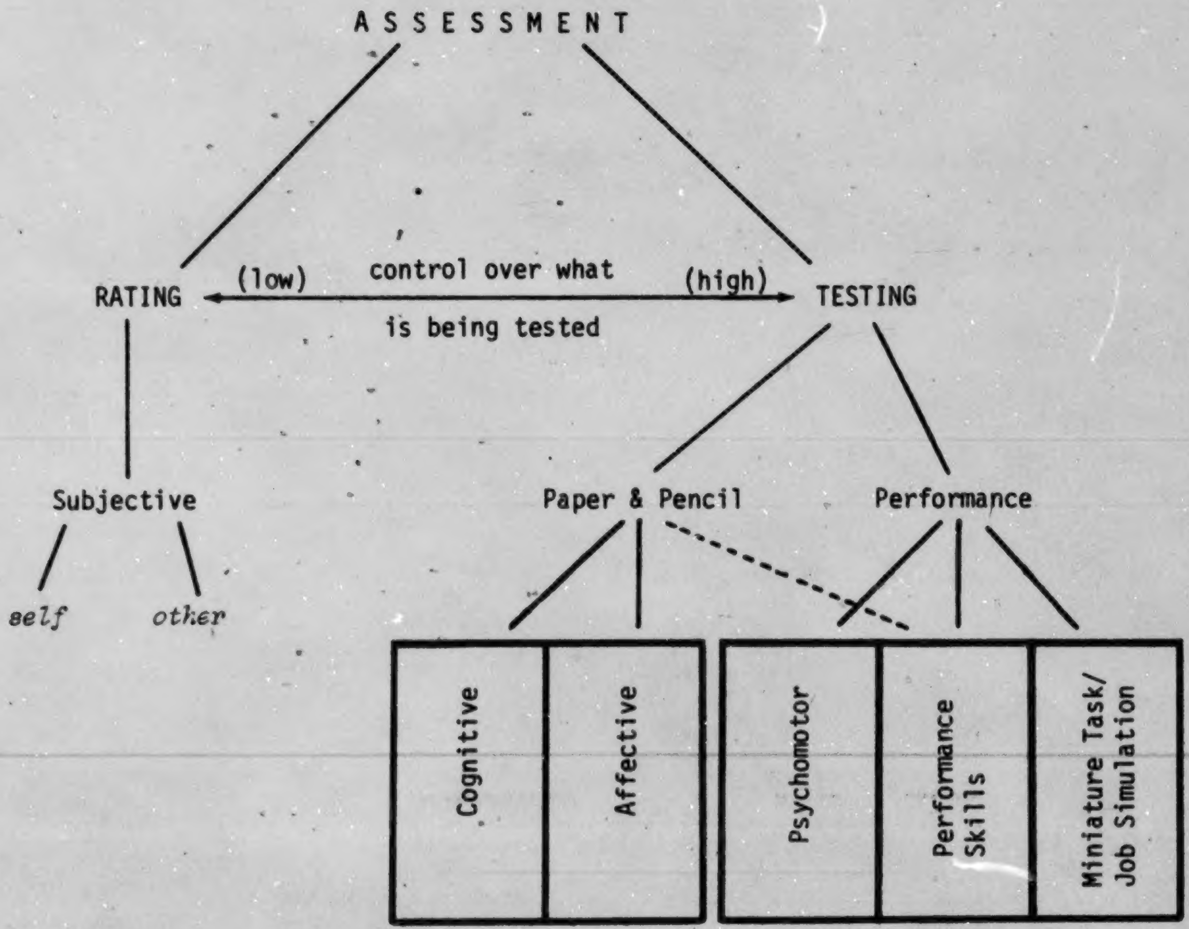
The training assessment instruments appear to have potential use for "soft" formative evaluation of training programs, primarily by indicating the character of student reactions.

METHODS OF ASSESSMENT

Figure 1 provides a simple schematic for classifying the more common forms of assessment that involve standardized instrumentation.*

Figure 1

METHOD OF ASSESSMENT


ASSESSMENT
RATING
(low)
control over what is being tested
(high)
TESTING
Subjective
self
other
Paper & Pencil
Performance
Cognitive
Affective
Psychomotor
Performance Skills
Miniature Task/ Job Simulation

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* We have noted that much assessment with respect to linking agents is accomplished subjectively, informally, and without standardized instrumentation.

Ratings and testing are depicted at opposite ends of a continuum that may be conceptualized in terms of control over what is being tested. Tests vary in their degree of control, but generally provide a surer and more objective basis for knowing the specific test content and the methods of administration, grading, and interpretation that are applied. Ratings, on the other hand, are decidedly more subjective and afford less control over how rating items will be interpreted or how rating scales will be used.

The most common form of standardized tests are (a) paper and pencil, and (b) performance. Paper and pencil tests tend to be used primarily for assessment in the cognitive (Bloom, 1956) and the affective (Krathwohl et al., 1964) domains. Performance tests, although they may test cognitive or affective components, are usually employed to assess simple psychomotor skills, more complex performance skills, or highly complex performance in miniature job tasks or other simulations.

Rating includes a variety of self- and other-reporting methods that may involve a wide variety of content, including: personality, values, interests, attitudes; personal, educational, and work background and experience; and self or others' ratings (based on direct observation, general impressions, etc.) of social behavior, job performance, knowledge, attitudes, motivation, etc. Virtually all of the instruments found in this search involved some form of rating. None could be considered standardized tests of knowledge or performance.

ASSESSMENT INSTRUMENTS

The instruments identified by our search are briefly outlined in Table 1. The first five are supported by published reports that provide data and other information relating to their development, validation, or use. These instruments, together with summaries of the reports and references, are included in Attachment A. There is no published report for any of the remaining seven instruments.* Copies of these instruments are included in Attachment B.

Attitudes of Linkers

Two of the instruments deal with attitudes. The Baker School Counselor Attitudes (Table 1, #1) instrument deals exclusively with attitudes of school counselors toward change. Although the current version of the instrument is specific in focus, its status quo/change scale could be adapted to assess the change attitudes of any type of change agent or linker; however, this might require modification of the scale items. The Creighton Professional Preference Census (Table 1, #2) identifies significant role behaviors and preferences of internal linkers.

Communication Patterns

Instruments #2, #3, and #5 are all concerned in some way with identifying communication patterns of linkers and others. The Creighton Professional Preference Census was designed to identify and describe internal linkers within the Navy Civil Engineering Corps. The instrument is a self-report questionnaire; it would require adaptation for use in educational agency settings, but the methodology is applicable and many of the items (e.g., #2,

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* Results of the ASTD survey will be published in the ASTD journal in late 1978 or early 1979.

Table 1

BRIEF DESCRIPTION OF INSTRUMENTS

(See Attachment A for details on the following five instruments)

INSTRUMENTS (with data reports)	DESCRIPTION AND USE
1. Baker, S. An Instrument to Measure School Counselor Attitudes Toward Client Problems on a Status Quo/Change Scale	Measures school counselor attitudes toward client problems on a "status quo/change" scale. The instrument, which was designed for reseach, selection, teaching, and self-evaluation, measures counselor attitudes ranging from totally status-quo-oriented to totally change-oriented. The national sample preferred the counseling model in lieu of advocating either the change or the status quo models.
2. Creighton, J.W. Professional Preference Census	Although not directly applicable to public elementary and secondary school settings, there is some transferability if revisions were made. The study focuses on internal linkers in Navy Civil Engineering Corps assignments and on identifying characteristics typical of gatekeepers, opinion leaders, innovators, and early knowers of an innovation.
3. Davis, J.R. A Linker Performance Inventory	The instruments were designed to measure the effectiveness of participants in the Education Professions Development Act (EPDA) Training Program in southwestern schools. Two groups were surveyed by two questionnaires--one completed by the subject and one by his/her supervisor. The trainee group was found to be significantly more effective in transmitting information and skills needs to transform provincial schools into modern schools.
4. Hood, P.D. and Blackwell, L. An Assessment System for Competence-Based Education	A description of the development and a guide to the use of the assessment resources which have been developed in connection with the Development, Dissemination, and Evaluation (DD&E) Functional Competence Training Program Instruments include competence rating scales (DD&E Diagnostic Instrument), knowledge test, and task simulations. Only the "dissemination and marketing" competence rating scale is directly relevant to linker assessment. However, the multiple method assessment model deserves careful examination.
5. Jain, N. Communication Among Linkers	Focuses on land grant university faculty members who were assigned as Extension Specialists and Subject Matter Specialists in the Cooperative Extension Service. Each was asked to name three people whom s/he seeks out most frequently for information and advice.

Table 1 (continued)

(See Attachment B for details on the following seven instruments)

INSTRUMENTS (without data reports)	DESCRIPTION AND USE
6. American Society for Training and Development (ASTD) Questionnaire: "What Do Training and Development Professionals Really Do?"	Survey of 90 activities performed by ASTD members along with background information as a basis for identifying basic roles and competencies for training and development people.
7. Cole, B. Linker Competency Skills Assessment	A representative list of 4 broad and 44 specific linker skills are rated on 7-point "High/Low" scales in terms of degree of current competence and degree of need for further skill development.
8. Gasaway and Erwin, Illinois Office of Education State Departement Knowledge and Skills Self-Assessment Inventory	A list of 67 linker activities organized into 10 skill areas are rated on a 6-point "None to High" scale for knowledge ("Do I know what to do?") and skill ("How well can I do it?"). This instrument was used to obtain information on state department linkers prior to establishing a training program for them.
9. The NETWORK Diffusion Capability Self-Assessment Instrument	Provides an informal indication of training technical assistance needs by requesting brief written self-assessments of capability in 17 areas. Used in designing a training event and identifying resource agencies and individuals.
10. The NETWORK Field Agent Skills/Traits/Behaviors	This self-rating instrument has been tailored to the context of a specific educational linking agent project. Approximately 40 skills, traits, and behaviors are rated on a 3-point scale.
11. Research for Better Schools (RBS) Linker Training Needs Assessment Interview	An interview process assessing linker training needs in terms of role responsibilities, activities, and services provided.
12. Rosenau, F.S. Priority Training Needs of Linking Agents	An experimental instrument designed to sense nationwide training priorities as perceived by selected managers of dissemination activities, linking agents, and dissemination researchers. Presents 100 items organized in 10 ten areas and calls for ratings of frequency, criticality, and need for skill improvement.
13. Technical Assistance Brokerage Contractor, Capla Associates National Diffusion Network (NDN) Skills Identification	A set of 7 skill clusters and 11 items covering specific skill needs and experience of linking agents participating in the NDN's nationwide activities. Selected portions of this form may prove useful to managers of other dissemination projects.

#3, #5-7, #9-11, #14, #16, and #18) are directly usable. The Davis Linker Performance Inventory (#3) is specifically designed for school settings and is intended to provide "self" and "others'" appraisals of the linking behavior or ability of selected individuals. Ten questions (e.g., how many reports concerning innovations has this person prepared and distributed to school personnel?) and fifteen rating items dealing with "demonstrated ability" (e.g., to "understand and translate research findings") constitute the two LPI scales. The Jain study (#5) employed sociometric questions to establish relationships between communication characteristics and opinion leadership.

Job Activity Surveys

The ASTD questionnaire, "What Do Training and Development Professionals Really Do?" (#6), is perhaps the only example of a quality activity survey that provides information on the frequency and importance of work activities. Not all items are pertinent to linking agents, but the questionnaire provides a good model for this type of instrument.

Training Needs Assessment

The remainder of the instruments are in this category. Five involve ratings of lists of activities; two are qualitative in nature. The Hood and Blackwell DD&E Diagnostic Instrument (#4) is the only one to provide development and validation data, and is only one of two instruments that employ a descriptive proficiency rating scale as opposed to the more commonly encountered three- or five-point "high/low" rating scales. Self ratings and others' ratings may be employed to estimate proficiency based on samples of items selected to represent significant competencies in each of six generic skill areas (collecting information, analyzing, planning, producing, evaluating, and communicating). These six skill clusters are repeated in each of three work contexts (development, field test and evaluation, and dissemination and marketing). The instrument uses a skills by work context matrix that provides an especially useful summary of each individual's scores along the two dimensions. Estimated current proficiency is compared to student- or instructor-established objectives to identify discrepancies where further training is indicated. Cluster analysis of the DD&E instrument based on data representing a diverse sample of DD&E students and professionals produced four identifiable item clusters, two of which are directly relevant to dissemination--a publication, production, and public relations cluster of 12 items and a dissemination planning and dissemination evaluation cluster of 24 items.

Instruments #7, #8, #12, and #13 are quite similar. Each employs a list of linker skills that are clustered into several skill categories. One or more ratings (e.g., current level of competence, frequency of performance, degree of need for training) are made for each item and sometimes also for the cluster itself. The Rosenau Priority Training Needs of Linkers (#12) was based in part on the DD&E Assessment System and employs the same item sampling approach (i.e., items in each skill cluster are selected and interpreted as samples of a much larger domain of possible items, rather than as definitive lists of all relevant skills; hence the pattern of ratings on several similar items must be considered in inferring individual or group training needs). The Rosenau instrument, however, calls for ratings not on level of competence (as in the DD&E Diagnostic Instrument), but in terms of frequency of performance, criticality for job effectiveness, and need for skill improvement.

The Gasaway and Erwin Knowledge and Skills Self-Inventory (#8) appears to be an improved variant of the Rosenau item list. However, ratings in this instrument use six-point descriptive scale ("none" to "high") ratings of (a) knowledge (Do I know what to do?), and (b) skills (How well can I do it?). The descriptive rating scale is similar to the DD&E Diagnostic Instrument scale, but calls for separate ratings for knowledge and for skills. Similar to the DD&E instrument, it also provides an individual summary in the form of a skills profile on each of ten skills clusters.

The NDN Technical Assistance Broker (TAB) Skills Identification form (#13) provides an extensive listing of 111 activities organized into seven clusters. A number of different ratings are requested, among them, two ratings (need for assistance; experience in the skill) are directly pertinent for training needs assessment. Unfortunately, the ratings are made on the basis of "0, 1, 2, 3, or 4" scales that have no descriptions or anchors. An anchored or descriptive rating scale would undoubtedly improve the value of this instrument.

Like the TAB Skills Identification instrument, the Cole Linker Competency Skills Instrument (#7) also requests ratings on the degree to which "you believe you have the skill" and "the degree to which you believe you need further development in the skill." Both ratings are made on seven-point "low" to "high" scales. A list of 67 linker activities are organized in ten skill areas.

The NETWORK Field Agent Skills/Traits/Behavior instrument (#10) is also a self-rating instrument that employs a simple three-level scale ("I need lots of work on this one;" "I could use some polishing on this one;" "I am rather strong in this dimension") to sort out quickly and roughly individual perceptions of training needs among approximately 40 skills, traits, and behaviors considered relevant for the NETWORK field agents.

The remaining two instruments in the compendium provide qualitative descriptions, rather than ratings. The NETWORK's Diffusion Capability

Self-Assessment instrument (#9) is unusually simple. It calls for brief open-ended written descriptions of self-assessed project diffusion capabilities in each of 17 areas (e.g., "Identifying appropriate target audiences for your project"). The instrument would appear to be useful mainly where there would be opportunity to follow-up with oral interviews. (We note that this instrument was designed to assess project capability and technical assistance needs rather than individual capability and training needs.)

The RBS Linker Training Needs Assessment Interview (#11) involves a far more complex approach that leads the interviewee progressively through discussion of general linking agent roles, specific content areas, and role requirements in each role to examination of specific comprehensive planning activities with examples, then to detailed examination of tasks performed in each activity, including discussion of requisite knowledge and skills, and finally to examination of areas where training is perceived as needed or desired. Unfortunately, the interview is unstructured, and much depends on the interviewing skills and content knowledge of the interviewer. RBS staff indicate that they derived training needs information from a content analysis of a series of interviews with state education agency staff.

Skill Areas Covered

Figure 2 provides a summary of the skill content areas which each instrument includes in some way.

Figure 2

CONTENT ANALYSIS OF SKILL AREAS

INSTRUMENT / SKILL AREA	COLLECTING INFORMATION	ANALYZING	PLANNING	PRODUCING/ MANAGING	EVALUATING	COMMUNICATING	ENTRY/ INTERVENTION	POWER/ INFLUENCE	CONFLICT MANAGEMENT
1. Baker: School Counselor Attitudes Toward Client Problems on a Status Quo - Change Scale						X			
2. Creighton: Professional Preference Census	X					X			
3. Davis: Linker Performance Inventory		X	X		X	X	X		
4. Hood and Blackwell: DD&E Diagnostic Instrument	X	X	X	X	X	X			
5. Jain: Communication Among Linkers	X					X			
6. American Society for Training and Development (ASTD): What Do Training and Development Professionals Really Do?	X	X	X	X	X	X	X		
7. Cole: Linker Competency Skill Assessment			X		X	X		X	
8. Gasaway and Erwin: Knowledge and Skills Self-Assessment Inventory	X	X	X	X	X	X	X	X	X
9. The NETWORK: Diffusion Capability Self-Assessment Instrument	X	X	X	X	X	X			
10. The NETWORK: Field Agent SKills/ Traits/Behaviors	X	X	X			X			
11. Research for Better Schools (RBS): Linker Training Needs Assessment		X	X		X	X		X	
12. Rosenau: Priority Training Needs of Linking Agents	X	X	X	X	X	X			
13. Technical Assistance Brokerage Contractor, Capla Associates: National Diffusion Network (NDN) Skills Identification	X	X	X	X	X	X			

PSYCHOMETRIC STANDARDS

The standards which are normally applied to testing/assessment situations are of importance to all test users. Among these, documentation concerning the reliability and validity of assessment information is obviously an important consideration.

The American Psychological Association (APA) Standards, for example:

> ...are written specifically to apply to standardized tests. They apply in varying degrees, however, to the entire range of assessment techniques. If it is required that a relationship be demonstrated between scores (assessments) on an employment test and subsequent performance on a job, the requirement should in principle also apply to the judgment (assessments) of the employment interviewer. It may be possible to apply the standards with the same rigor, but the kind of judgments the interviewer is to make can be identified; the time and procedures for developing and recording them can be standardized; and they can be validated in the same way that scores are validated. When someone who makes personnel decisions develops his own assessment techniques...he will find the standards useful guides for developing information similar to that in good test manuals; the principles are as relevant to him as to the professional test developer.

Also, tests can be classified in many different ways:

> Some are designed to measure abilities, some to measure accomplishments, others to measure attitudes or interests. Some are inventories, interview aids, biographical forms, and experimental diagnostic devices, and are not called tests. Generally, however, the word "test" is used in these standards to apply to all kinds of measurement. What these different kinds have in common is that scores with desirable psychometric properties may be derived from each.

Interview techniques present a special problem in the sense that a certain amount of subjectivity must always become a part of the assessment. Hence...

> ...the qualitative nature of the assessment is less the point at issue than the distinction that can be made between clinical and actuarial prediction. When tests, projective or otherwise, are used as aids to an interviewer's

> assessment, the interviewer is himself the final assessment device, and his assessments become the "scores." These assessments can and should be validated like other psychometric measures. (APA Standards, 1974, pp. 1-4)

As outlined in Figure 1, evaluation/assessment generally employs one of two major methods: rating and testing. Rating, whether it is self-rating or done by others, is necessarily subjective. Testing, on the other hand, is more objective. Commonly, the so-called "paper-and-pencil" tests provide measures of cognitive and affective skills, while performance tests attempt to measure psychomotor or complex behavioral skills. In all cases, reliability and validity factors should be of crucial importance. In that context, the following working definitions are useful:

> Validity. Evaluation results are valid to the extent they represent measures of what was intended to be measured, i.e., results are valid if correct interpretations of the intended kind can be made on the basis of the results. Validity is a very broad criterion. It includes *relevance, comprehensiveness, reliability,* and *objectivity* as subordinate criteria. To be valid, evaluation results must meet all of the subordinate criteria. Validity is, therefore, the most important criterion for judging the trustworthiness of evaluation data.
>
> Sometimes it is necessary to use evaluation instruments that are only partially valid, or for which the degree of validity is unknown. If so, it is important to use *multiple indicators* when possible. That is, use two or more instruments or procedures and see if there is a convergence in the results. If results from several instruments agree, more confidence can be placed in them than in the case of results from a single instrument. Use of multiple indicators, therefore, is likely to increase the validity of data as well as adequacy for making decisions.
>
> Relevance. To be valid for a particular purpose, an evaluation instrument or procedure must provide data that are clearly related to the purposes of the evaluation. An obvious example is that a written test would not be fully relevant for testing swimming and life-saving skills. It could be used for testing knowledge about such procedures, but relevant testing of the actual skills would require that the student perform in the water. The lack of relevance of the written test would make it invalid for testing the skills. Another example is that a standardized achievement test may be lacking in relevance (and therefore validity) for measuring the success of an educational program if the objectives of the program were different from those measured by the test.

> Comprehensiveness. If an evaluation is to be valid, it must provide for assessment of all aspects of what is to be measured. For example, a comprehensive arithmetic test could not be limited to multiplication of two-digit numbers. It should also include addition, subtraction, division, etc. Similarly, if the objectives of an educational program include intellectual skills such as application, analysis, and synthesis, a test limited to simple applications only would not be comprehensive and would, therefore, be only partially valid. If the goals of the program include changes in attitudes as well as cognitive attainments, techniques for measuring attitudes must be included for comprehensive assessment of the success of the program.
>
> Reliability. Reliability refers to the consistency of evaluations. For example, if a placement test shows a student to be at the third grade level when the test is administered on Monday, and at the fifth grade level when it is administered again on Friday, the results are unreliable. Likewise, a mental ability test would be unreliable if it yielded an IQ score for a student of 128 one week and a 93 from a parallel form of the test administered the following week. To the extent that test data or other evaluation results are unreliable they are also invalid, because the lower the reliability, the more the scores represent errors of measurement instead of what was intended to be measured.
>
> Objectivity. This criterion can be considered to be a subordinate aspect of reliability, since any objectivity problem will affect the consistency of results obtained by different evaluators. Results are objective if they reflect the actual characteristics of the students without distortion due to the biases or preferences of the evaluator. To the extent that the subjective factors influence scores on an essay test, for example, inconsistent (and therefore at least partially unreliable and invalid scores are likely to be obtained by different scorers--even when scoring the same test paper. (Sawin & Blackwell, 1975, pp. 19-20)

Because only five of the compendia instruments contain any kind of data report, it is difficult to make judgments concerning the psychometric quality of the majority of these instruments. Each of the first five instruments provides some form of empirical validation (e.g., expert judges, other concurrent measures, differences between groups with different levels of experience); however, the remaining instruments depend entirely on "face validity." Few of the instruments provide any form of test-retest reliability information.

Moreover, because most of the instruments depend on ratings or open-ended responses, there may also be problems with the objectivity of the informant. Open-ended responses also involve subjective judgments to be made in analyzing responses. We assume that a test user would select instruments or items within instruments on the basis of their content relevance (face validity). However, it is also necessary that the instrument users establish empirically for themselves the validity and the reliability of any of these instruments.

The four studies which appear to have some promise in terms of applicability to linking agent situations are discussed briefly below in terms of their general methodology and findings.

Baker, S. The Development of an Instrument to Measure School Counselor Attitudes. The purpose of this dissertation study was to develop an instrument which would measure school counselor attitudes toward client problems on a status quo - change agent scale. Item selection was based on high consensus among judges and the need to provide a variety of content. After a preliminary measurement study, a role-playing study was used to establish construct validity. Finally, a national sample was surveyed to establish reliability coefficients, norm profiles, and the cumulative percentage distribution of total scores. The national sample preferred the intermediate "change-oriented counselor" to either the "change agent" or "status quo advocate."

Creighton, J.W. Professional Preference Census (PPC). The Professional Preference Census and its oral counterpart, the Oral Linker Census (OLC) were developed and tested on a pilot sample of 100 Navy students and officers at the Naval Postgraduate School. The instruments were then revised on the basis of item analysis results and administered to all officers within the U.S. Navy Civil Engineer Corps (N=1,726). PPC results were compared with scores on the Oral Linker Census that was administered to a sample. Statistical tests confirmed the validity of the revised PPC in terms of comparable results obtained with the orally administered OLC.

Davis, J.R. A Linker Performance Inventory. The difference on the Linker Performance Inventory between trained (N=60) and non-treatment (N=50) groups was highly significant. The instrument was then used as a criterion against which a number of other candidate linker selection predictor instruments were compared.

Hood and Blackwell. Development, Dissemination, and Evaluation (DD&E) Diagnostic Instrument. Following several preliminary tests and revisions, a field test of the instrument (which was part of a larger assessment battery) was conducted at ten academic institutions offering training in educational R&D and at nine R&D agencies throughout the country. Validation data, collected on 78 subjects representing a wide range of experience and training (62 graduate and undergraduate students and 16 experienced educational product developers in R&D agencies), demonstrated that all scales and the majority of individual items exhibited statistically significant and practically interpretable differences between groups.

Applicability

The four instruments for which validation data is available vary somewhat in terms of their applicability to linking agent situations. Only the Davis study deals directly with linking agents in a school context. It focuses on very general abilities and behaviors of linkers. Nonetheless, the instrument does appear to have some potential value in identifying natural linkers in school settings. The DD&E Assessment System (Hood and Blackwell), although it takes a product development and marketing perspective, may have considerable methodological value for linker training since it developed a system by which performance, knowledge, and aptitudes can be assessed at entry, during training, and after training.

See Figure 3 for a summary of the four studies.

Figure 3

SUMMARY OF FOUR STUDIES

BASIC QUESTIONS	STUDIES			
	Hood & Blackwell	Baker	Crieghton	Davis
Who are the test subjects?	Trainees, employees, students	School counselors	Naval Civil Engineer Corps employees	Southwestern school district staff
What was the validation sample?	62 graduate and undergraduate students, 16 product developers	9 qualified counselor validators, 17 first-year master's degree candidates, 251 counselors in practice and 222 counselors in training	100 Navy officers; 1,726 Navy Civil Engineer Corps employees	60 EDPA trainees; 60 control school staff
What is being tested?	Proficiency levels/competency-based skills	Counselor attitudes toward change	Characteristics of opinion leaders re innovation	Effectiveness of EDPA Training Program
What was the product?	Guidance device for student program planning/individualized study	Change agent attitudes measurement scale	Role behavior model for internal linkers	Criterion measurement instrument based on rated performance and capability
Degree of applicability to LA assessment situations	High for method	Potential use with revisions	High with revisions	High/no revisions needed

CONCLUSION

The results of this search for linker personnel and training assessment instruments are quite meager indeed. Few relevant instruments were found and the majority of these appear to be "one-shot" devices that were developed with little or no effort to test and refine them or to collect and publish data on their reliability and validity. Perhaps because linker training is so new, most of the instruments seem to focus on identifying who linkers are or on determining general or specific needs for training. None of the instruments go beyond ratings or subjective appraisals of ability or performance. Formal testing, either in paper-and-pencil or performance test formats, have not appeared except as highly specific curriculum-embedded knowledge tests.

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ATTACHMENT A

INSTRUMENTS AND DESCRIPTIONS

INSTRUMENT	*DOMAIN/CONTENT AREA*	*PAGE*
1. Baker, S. The Development of an Instrument to Measure School Counselor Attitudes Toward Client Problems on a Status Quo - Change Agent Scale	Attitudes	3
2. Crieghton, J.W. Professional Preference Census	Communication Activity Attitudes	5
3. Davis, J.R. A Linker Performance Inventory	Communication Activity Skills	11
4. Hood, P.D. and Blackwell, L. An Assessment System for Competence-Based Education	Knowledge Skills	15
5. Jain, N. Communication Among Linkers	Communication Activity Skills	29

INSTRUMENT #1

Baker, Stanley B. The Development of an Instrument to Measure School Counselor Attitudes Toward Client Problems on a Status Quo - Change Agent Scale (dissertation). Buffalo, NY: State University of New York, 1971.

Dissertation Abstracts Order Number: 72-10,475
159 pages

The purposed of this dissertation was to develop an instrument which would attempt to measure school counselor attitudes toward client problems on a status quo - change agent scale. The instrument could be used for research, selection, teaching, and self-evaluation.

The scale consists of six nominal categories, which ranged from status quo to change agent:

1. The strong status quo advocate, who is unwilling to change the status quo.
2. The status quo advocate with secondary interest in the client, who is unwilling to change the status quo but willing to be of some help to the client.
3. The status-quo-oriented counselor, who is not interested in change but desires to help the client adjust through counseling him/her.
4. The change-oriented counselor, who is interested in change but wishes to help the client become self-directed through counseling him/her.
5. The semi-active change agent, who is interested in change and desires to help the client find sources of aid.
6. The strong change agent, who is interested in change and is willing to get personally involved in helping the client.

Based on this six-level scale, items were created in which the stems presented the subjects with descriptions of a client problem. Following each stem were six possible counselor responses to that problem, each of which represented one of the six nominal categories. After presenting items to editors, revisions were made; then the revised instrument was presented to qualified counselor validators. From the original group, 20 items were selected for the final instrument. Selection was based on high consensus validity coefficients and a desire to provide a variety of content.

After preliminary measurement study, a role-playing study was used to establish construct validity. Finally, a national sample was surveyed with respect to reliability coefficients, norm profiles, and the cumulative percentage distribution of total scores. The national sample preferred the counseling model to either the change agent or the status quo advocates.

INSTRUMENT #2

Creighton, J.W. "Professional Preference Census." In Creighton, J.W., et al., Enhancement of Research and Development Output Utilization Efficiencies: Linker Concept Methodology in the Technology Transfer Process. Monterey, CA: Naval Postgraduate School, 1972.

ERIC ED 127 703 - 158 pages

This instrument is a self-administered questionnaire consisting of a series of items designed to identify significant role behaviors and preferences of internal linkers in Naval Civil Engineering Corps assignments. "Our description of the linker assumes that he operated within the organization which receives the knowledge. Such a restriction upon the role of the linker decreases the usual typology of linker roles to that of leader (gatekeeper and opinion leader) early adopter of an innovation (innovator), and early knower."

The Professional Preference Census (PPC) was developed after reviewing the literature to identify traits and characteristics typical of gatekeepers, opinion leaders, innovators, and early knowers of an innovation. The PPC and its oral counterpart, the Oral Linker Census, were developed and tested on a pilot sample of 100 Navy students and officers at the Naval Postgraduate School. The instruments were then revised on the basis of item analysis results. The Revised Professional Preference (RPPC), a 19-item, multiple-choice format questionnaire, was then administered to all officers within the U.S. Naval Civil Engineering Corps (N=1,726). A 76 percent response rate was achieved. Item analysis indicated that two items (#14 and #15) were not discriminating. After deletion of these two items, the final sample was separated arbitrarily into five groups based on the distribution of the composite scores: linkers (N=41), potential linkers (N=132), non-discriminating majority (N=797), potential stabilizers (N=118), and stabilizers (N=30). "Stabilizers" scored below 32 points; "potential stabilizers" scored 32 to 43 points; the non-discriminating majority scored 43 to 55, potential linkers, 55 to 61; and linkers, above 61 points. An oral Linker/Stabilizer Validity Census (L/SVC) was administered to a subsample of those identified as linkers or stabilizers. Statistical tests confirmed the validity of the RPPC in terms of agreement with the L/SVC.

Note that the item count of a few RPPC items would not be applicable to public elementary and secondary education settings, but in most cases suitable revisions can be made. The most discriminating items on the RPPC are #16 (frequency of recommending specific information items to colleagues), #4 (number of non-routine work-related projects completed for which you supplied the original idea), and #10 (total number of journals, magazines, and newspapers you read regularly). Note that items #14 and #15 were not discriminating. For educational dissemination applications, consider omitting #1 and perhaps modifying the wording of #4, #5, #8, #13, and #19 (#19 is not scored).

Scoring of Revised Professional

Preference Census

PROFESSIONAL PREFERENCE CENSUS

1. Assuming that you were to make the Navy a career, what would be the **highest** rank to which you would aspire? _____

   1 a) Lieutenant Commander
   2 b) Commander
   3 c) Captain
   4 d) Rear Admiral
   5 e) Admiral

2. Indicate the type of information upon which you would place **highest** credibility. _____

   5 a) Personal knowledge
   4 b) Associated staff
   3 c) Vendors and/or trade councils
   2 d) Literature - journals, books, etc.
   1 e) Analysis and experimentation

3. Indicate which combination of words, when placed in the following sentence, would most accurately describe you: I feel that I hear about new work-related developments in my professional area __________________________ most of my colleagues. _____

   5 a) considerably before
   4 b) sooner than
   3 c) at about the same time as
   2 d) later than
   1 e) sometime after

4. In the past **year**, how many nonroutine, work-related projects have been completed for which you supplied the **original** idea? _____

a) 0	b) 1-2	c) 3-4	d) 5-6	e) More than 6
1	2	3	4	5

5. Indicate the number of technical and/or scientific society meetings and/or conventions which you attended last **year** which involved personnel other than your immediate circle of colleagues. _____

a) 0	b) 1-2	c) 3-4	d) 5-6	e) More than 6
1	2	3	4	5

6. When you are on the job, do you **most prefer** work that is: _____

   2 a) concerned with accomplishing a specific task
   5 b) concerned with attempting to solve a challenging but not specifically assigned task
   3 c) concerned with accomplishing those tasks for which I am individually responsible
   4 d) concerned with the efficient utilization of resources
   1 e) None of the above

7. In the past month how many times have you sought further information about a new idea or ideas which you thought to be useful to your work? _____

a) 0	b) 1-2	c) 3-4	d) 5-6	e) More than 6
1	2	3	4	5

8. Mr. E., a civil engineer, who is married and has three children recently decided to perform some major improvements upon his house (cost approximately $1,000). Mr. E. realized that the improvements were not urgently required but would make life at home more comfortable for the family. Consequently, Mr. E. was faced with a decision as to how he should finance the home improvements because such seemed to be the sole determinant as to when the E's could utilize these improvements. Indicate which of the following financial decisions you would advise Mr. E. to make for his home improvements. _____

5 a) Borrow the necessary money immediately at 18% annual interest.
4 b) Save for 6 months and borrow the remainder at 10% annual interest.
3 c) Save for one year & borrow the remaining at 7% annual interest.
2 d) Save for two years & pay cash for the improvements if the present interest rates remain the same.
1 e) Make no improvements.

9. Indicate the frequency with which your subordinates, peers, and/or superiors came to you in the past month for work-related information and/or advice which was not a function of your formal position. _____

a) 1-3	b) 4-9	c) 10-15	d) 16-20	e) More than 20
1	2	3	4	5

10. Indicate the total number of journals, magazines, and newspapers which you regularly read: _____

a) 1-2	b) 3-4	c) 5-6	d) 7-8	e) More than 8
1	2	3	4	5

11. Indicate the number of technical, scientific, and/or professional societies to which you hold current membership. _____

a) 0	b) 1-2	c) 3-4	d) 5-6	e) More than 6
1	2	3	4	5

12. Indicate the level within the social strata to which you would aspire to be 10 years from now. _____

5 a) Upper
4 b) Lower-Upper
3 c) Upper-Middle
2 d) Middle
1 e) Lower-Middle

13. Mr. C., a civil engineer, who is employed by a medium sized construction firm recently learned of a new building material which is used extensively in Europe but never adopted in the United States. The building material appears to have several advantages in terms of substantial cost reduction, superior insulation qualities, and relative ease of _____

construction as compared to its counterpart in the United States.

After a thorough investigation, Mr. C. obtained extensive and reliable information on the characteristics, costs, and advantages of the new material. Further, his company could easily obtain exclusive manufacturing rights for use in the United States.

Imagine that you are Mr. C. Indicate which of the following would best describe your approach to the building material.

5 a) Recommend that the new idea be utilized in the firm's next major building project so as to take advantage of the substantial cost savings.
4 b) Recommend that the building material be used in one of the firm's small, local building projects so as to test its acceptance.
3 c) Recommend that the firm construct a non-commercial prototype.
2 d) Recommend that the firm engage the services of an independent consultant firm so as to verify the information obtained and to test market acceptance.
1 e) Recommend that the firm wait until the building material has received considerable commercial application in the United States.

14. In your experience, which of the following do you tend to rely most heavily upon as a source of technical information for work-related projects and/or problems? _____

2 a) Literature-books, government manuals, and professional trade and technical journals.
3 b) Vendors-representatives of, or documentation generated by suppliers or potential suppliers.
1 c) Personal experience - ideas which were previously used by yourself in similar situations and recalled directly from memory.
4 d) Staff - selected members of your staff who are not assigned directly to the project being considered.
5 e) External sources - sources which do not fall into any of the above categories.

15. Indicate the group of people to whom you primarily relate. _____

1 a) Officers within your specialized field.
2 b) Work-related colleagues (both military and civilian).
3 c) Community associates.
4 d) I have a primary reference group but it is people other than those listed above.
5 e) I do not have a primary reference group.

16. During the last month, indicate the relative frequency with which you recommended a specific item of interest, e.g., journal article, research report, or a lead to either, to a colleague which dealt with a work-related topic. _____

a) 0	b) 1-2	c) 3-4	d) 5-6	e) More than 6
1	2	3	4	5

17. Mr. A., a middle management executive, who is married and has one child, has been working for a corporation since graduation from college five years ago. He is assured of a lifetime job with a modest, though adequate, salary, and liberal pension benefits upon retirement. On the other hand, it is very unlikely that his salary will increase much more before he retires. While attending a convention, Mr. A. is offered a job with a small, newly founded company which has a highly uncertain furture. The new job would pay more to start and would offer the possibility of a share in the ownership if the company survived the competition of the larger firms. ____

Imagine that you are advising Mr. A. Listed below are several probabilities or odds of the new company's proving financially sound.

Please check the lowest probability that you would consider acceptable to make it worthwhile for Mr. A. to take the new job.

5 a) The chances are 1 in 10 that the company will prove financially sound.
4 b) The chances are 3 in 10 that the company will prove financially sound.
3 c) The chances are 5 in 10 that the company will prove financially sound.
2 d) The chances are 7 in 10 that the company will prove financially sound.
1 e) The chances are 9 in 10 that the company will prove financially sound.

18. Indicate which of the following best characterizes your approach to an innovative idea: ____

5 a) Very eager to adopt new ideas.
4 b) Discreet use of new ideas.
3 c) Deliberate for sometime before adopting a new idea.
2 d) Skeptical & cautious about adopting a new idea.
1 e) Prefer to only use proven ideas.

INSTRUMENT #3

Davis, J.R. A Study to Aid the Selection of Linkers for the Educational Change Process (dissertation). Las Cruces, NM: New Mexico State University, 1971.

Dissertation Abstracts Order Number: 71-26926
114 pages

This instrument is based on a review of the literature to ascertain tasks required of linkers and skills needed by linkers. (A linker in a public school system is defined as a person, e.g., teacher, counselor, or administrator, who is selected from within the school system to become an active member of the linking system while remaining in the school context. The role is two-way in that the linker is expected to carry the needs of colleagues to outside experts and researchers, as well as to bring new and innovative ideas back to the school.) The instrument consists of 10 objective items (e.g., "How many innovative ideas has this person conveyed to you orally?") and 15 Likert-type rating items (e.g., rate the individual's demonstrated ability to "make peers aware of new ideas"). The instrument was developed in two forms: one to be completed by the subject, and one to be completed by the subject's supervisor.

The LPI was developed and used as a criterion variable in a dissertation study involving 60 EDPA trainees selected from Southwestern schools. Fifty educators were selected from the same or similar schools to act as a non-treatment group. The training program was designed to equip inschool linkers "with the information and skills needed to transform provincial schools into modern schools." The instrument was used as a criterion against which a number of candidate linker selection predictors (i.e., biographic data, Cattell 16PF scale, the FIRO-B) were compared, since the difference on the LPI between the trained and the non-treatment groups was highly significant.

Predictor variables that were selected against a composite LPI criterion based on the average for self and supervisor's ratings included job position, low number of inservice workshops, high number of meetings outside district, high number of professional memberships, and most of the Cattell 16PF and FIRO-B subscales. The results of a factor analysis are reported in Davis' study.

Rater________________ Ratee_______________

LINKER PERFORMANCE INVENTORY

What is a linker?

A linker, in a public school setting, is a person (teacher, counselor, administrator) who is selected from within the school system to become an active member of the linking system while remaining in the school content. His role in the linking system is a two-way role in that he is expected to carry the needs of his colleaguse to outside experts and researchers as well as bring new and innovative ideas back to the school. He may be known by other names such as "change agent," "consultant," "extension specialist," "demonstrator," etc. Basically, his job is one of gathering, processing, and distributing educational knowledge. He might be considered to be a "salesman" of new educational ideas.

In light of the foregoing passage, will you please answer the following questions concerning the person whose name is listed at the top of the page. Keep in mind that this is not an evaluation of the person as a teacher, counselor, or administrator. Rather, it is an attempt to identify those persons who will make good linkers. The basic assumption is that not all good educators make good linkers any more than everybody can sell used cars. Answer these questions in reference to the present (1970-71) school-year.

1. How many written innovative plans, either organizational or instructional has this person presented for your approval? ____
2. How many innovative plans, either instructional or organizational, has this person implemented? ____
3. How many other staff members has this person induced to try new techniques? ____

4. How many meetings has this person initiated to disseminate or demonstrate innovations to peers? ____

5. How many meetings has he/she attended to seek innovative information? ____

6. How many reports concerning innovations has this person prepared and distributed to school personnel? ____

7. How many innovative ideas has this person conveyed to you orally? ____

8. To your knowledge, how many outside experts has this person contacted for advice? ____

9. To your knowledge, how many experts within the school has this person contacted for advice? ____

10. To your knowledge, how many times has this individual carried specific needs from peers to researchers or experts? ____

Rate the individual's demonstrated ability to: Low High

1. Make peers aware of new ideas. 1 2 3 4 5
2. Understand and translate research findings. 1 2 3 4 5
3. Make new ideas attractive to educators. 1 2 3 4 5
4. Overcome peer apathy. 1 2 3 4 5
5. Identify those peers most likely to innovate. 1 2 3 4 5
6. Be accepted by peers and researcher. 1 2 3 4 5
7. Assist in trial and adoption of innovations. 1 2 3 4 5
8. Evaluate and screen research output. 1 2 3 4 5
9. Prepare written information documents. 1 2 3 4 5
10. Identify needs of the school. 1 2 3 4 5
11. Communicate to peers on an individual basis. 1 2 3 4 5
12. Get the point across in group meetings. 1 2 3 4 5
13. Convince parents and the community of the need for change and innovation. 1 2 3 4 5
14. Understand needs of parents and students. 1 2 3 4 5
15. Supply "the answer" to questions concerning innovations, when asked by members of the school community. 1 2 3 4 5

INSTRUMENT #4

Hood, P. and Blackwell, L. "DD&E Diagnostic Instrument." In Hood, P. and Blackwell, L., *An Assessment System for Competence-Based Education: The Educational Development, Dissemination, and Evaluation Training Program*. San Francisco, CA: Far West Laboratory for Educational Research and Development, 1975.

This instrument consists of a sample of 72 competence statements which were drawn to provide equal representation of three major work contexts--development, dissemination, and evaluation (24 items each)--and simultaneously to provide equal representation of six process skills--collecting information, analyzing, planning and designing, producing, evaluating, and communicating (12 items each, four in each of the three contexts). The instrument may be used in a self-rating or supervisor-rating version. Each item is rated on an eight-point scale that combines knowledge and experience to provide a behavioral reference for making judgments about the attained level of proficiency.

Following several preliminary tests and revisions, a field test of the instrument (which was part of a larger assessment battery) was conducted at ten academic institutions offering training in educational R&D and at nine R&D agencies throughout the country. A total of 78 subjects provided usable data (62 undergraduate and graduate students and 16 educational product developers in R&D agencies). Analysis of the data indicated that the DD&E Diagnostic Instrument items were highly intercorrelated, but that at least three or possibly four subscales can be differentiated. Cluster analysis resulted in four well-defined clusters: three associated with DD&E contexts, and a fourth derived primarily from items appearing in the D&D contexts relating to publication, production, and public relations. Factor analysis results suggest that only three factor scales are needed: (1) development, (2) field test and evaluation, and (3) production, dissemination, and marketing.

Neither the cluster analysis nor the factor analysis resulted in a group of competence statements associated primarily with any *one* of the process skills; however, the skill scale factor loadings on the newly-defined DD&E factors exhibit different and meaningful patterns of skill loadings. The *evaluation factor* is most prominently associated with collecting information, analyzing, and evaluating; the *production, dissemination, and marketing factor* with planning and designing, producing, and communicating; and the *development factor* with analyzing, planning and designing, producing, and evaluating.

Analysis of variance between the student and developer groups indicated that the majority of the items and all of the scales discriminate between these groups. In terms of the proficiency scale, the means for the majority of the competence statements for the student groups were below 4.0. On the other hand, the majority of the competence-statement means for developers were above 5.0. Both the students and the developers reported relatively higher levels of proficiency in development (4.0 and 5.4), followed closely by evaluation 3.9 and 5.2), with relatively lower levels in dissemination and evaluation (3.4 and 4.5).

It should be noted that the DD&E instrument takes a product development, evaluation, and marketing perspective. However, items from Publication, Production, and Public Relations Cluster Scale and from the Dissemination (Planning and Evaluation) Cluster Scale may be useful additions for any comprehensive sampling of dissemination competence.

The DD&E Diagnostic Instrument was developed for primary use as a guidance device to be used in planning a student's program of individualized study in conjunction with use of the DD&E competence-based learning resources.* The content of the instrument is based on the DD&E Competence Matrix (see Figure 1) which structures the important activities in development, dissemination, and evaluation (DD&E) in terms of three contexts and six process skills. The Diagnostic Instrument is composed of a sample of four items (activity statements) for each cell of the matrix. The task for the student (or other rater) is to rate the 72 items according to an eight-point proficiency scale. The proficiency scale combines levels of knowledge and experience.

LEVEL OF PROFICIENCY

1. S/he has no specific knowledge about this activity nor experience with it.
2. S/he has read about or seen this activity performed, but has no experience with it and doesn't really understand it.
3. S/he has studied this activity or has frequently seen it performed and has a good understanding of it, but *s/he has not yet done it.*
4. S/he has a general understanding of this activity and has had some experience with it, enough so that s/he can do it if s/he has either detailed instructions or close supervision.
5. S/he has enough experience in performing this activity to do it if given enough general supervision or general instructions.
6. S/he has enough knowledge and experience with this activity so that s/he can perform this task quite satisfactorily without supervision or job aids.
7. S/he has had extensive experience with this activity, and can perform it quickly and efficiently, and do a top quality job.
8. S/he considers her/himself an expert in this activity and fully qualified to accomplish unusually difficult or completely novel work.

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* The DD&E Training Resources consist of a Users' Guide and 23 self-instructional modules (46 to 127 pp.) organized in six series (planning, information/data collection and organization, communication, development, evaluation, and dissemination and marketing). The Guide and each of the modules are currently priced at $5.00 ($115.00 for the entire set), and are published and distributed by National Teaching Systems, Inc., 1137 Broadway, Seaside, CA 93955.

Figure 1. EXAMPLE OF USE OF DD&E DIAGNOSTIC INSTRUMENT RESPONSE FORM AS A STUDENT PROGRAM PLANNING DEVICE

Note: Numbers in brackets are student's self-ratings of current proficiency level. Objective (obj.) indicates student's general objective for each item block; "D" is the discrepancy.

	DEVELOPMENT	FIELD TEST & EVALUATION	DISSEMINATION & MARKETING	ROW TOTAL	ROW AVERAGE
COLLECTING INFORMATION	[4] 1. Obtain information on problems	[1] 25. Prepare a coding scheme	[2] 49. Collect data on installation costs		Obj=5.2
	[3] 2. Locate strategies for development	[6] 26. Organize statistical data	[1] 50. Design marketing study data forms		D=1.5
	[3] 3. Prepare a search strategy	[5] 27. Interpret scatter plots	[1] 51. Use information services		
	[6] 4. Evaluate information for relevance	[6] 28. Insure privacy in data collection	[6] 52. Construct an annotated bibliography 4th		
	[16] TOTAL AVERAGE [4.0] Obj. = 5.0 D=1.0	[18] TOTAL AVERAGE [4.5] Obj=5.5 D=1.0	[10] TOTAL AVERAGE [2.5] Obj=5.0 D=2.5	44	3.7
ANALYZING	[6] 5. Write a 20 page proposal	[3] 29. Discuss internal & external validity	[1] 53. Indentify character of target group		Obj=4.7
	[5] 6. Use instructional theories in design	[2] 30. Formulate evaluation questions	[1] 54. Evaluate market research techniques		D=1.9
	[2] 7. Review field test data for revision	[5] 31. Analyze test outcomes	[2] 55. Determine problems in installation 1st		
	[3] 8. Classify instructional objectives	[2] 32. Decide if tests fit evaluation plan	[2] 56. Secure copyright clearances		
	[16] TOTAL AVERAGE [4.0] Obj. = 5.0 D=1.0	[12] TOTAL AVERAGE [3.0] Obj=5.0 D=2.0	[6] TOTAL AVERAGE [1.5] Obj = 4.0 = 3.5	34	2.8
PLANNING	[2] 9. Plan a budget	[4] 33. Determine validity of your test	[1] 57. List important dissemination factors		Obj=5.2
	[1] 10. Specify format of materials	[1] 34. Design a project monitoring system	[2] 58. Design a public relations activity		D=2.7
	[5] 11. Sequence learning activities 4th	[5] 35. Plan control of extraneous variables 3rd	[2] 59. Determine a market for your product 2nd		
	[3] 12. Estimate needed production materials	[1] 36. Set criteria for field test sites	[3] 60. Prepare specifications for A/V material		
	[11] TOTAL AVERAGE [2.75] Obj. = 5.25 D=2.5	[11] TOTAL AVERAGE [2.75] Obj=5.5 D=2.75	[8] TOTAL AVERAGE [2.0] Obj = 5.0 D=3.0	30	2.5
PRODUCING	[2] 13. Secure waivers, releases, etc.	[4] 37. Use evaluation data to revise tests	[5] 61. Write scripts for film & slide shows		Obj=4.8
	[6] 14. Confer with specialists when needed	[4] 38. Adjust test procedures when needed	[3] 62. Write press releases about a product		D=1.2
	[6] 15. Write instructional exercises	[3] 39. Prepare a test administration manual	[2] 63. Prepare a sample product		
	[2] 16. Write copy from specifications	[6] 40. Discuss standardized interviews	[2] 64. Write specifications for user manual		
	[14] TOTAL AVERAGE [3.5] Obj. = 5.0 D=1.5	[17] TOTAL AVERAGE [4.25] Obj = 4.25 D=0	[12] TOTAL AVERAGE [3.0] Obj = 5.0 D=2.0	43	3.6
EVALUATING	[4] 17. Make recommendations from field data	[4] 41. Decide if statistics are suitable	[1] 65. Evaluate the product's distribution		Obj=4.2
	[3] 18. Conduct a case study of a program	[1] 42. Evaluate test instruments	[1] 66. Evaluate effect of a demonstration		D=1.5
	[2] 19. Check product against specifications	[4] 43. Find internal consistency of a test	[3] 67. Identify parts of a marketing study		
	[4] 20. Informally try out a product	[2] 44. Identify an evaluation's purpose	[3] 68. Interview users about product use		
	[13] TOTAL AVERAGE [3.25] Obj = 4.75 D=1.5	[11] TOTAL AVERAGE [2.75] Obj=4.0 D=1.25	[8] TOTAL AVERAGE [2.0] Obj = 4.0 D=2.0	32	2.7
COMMUNICATING	[5] 21. Write a position paper	[6] 45. Prepare an article for publication	[2] 69. Establish cooperation with users		Obj=5.6
	[2] 22. Discuss a product with user groups	[6] 46. Give a short speech or oral report	[3] 70. Deliver an oral presentation		1.4
	[1] 23. Interact in a staff meeting	[5] 47. Prepare simple evaluation reports	[6] 71. Demonstrate the use of a product		
	[4] 24. Communicate product specifications	[6] 48. Prepare graphs to display data	[5] 72. Translate data into verbal form		
	[12] TOTAL AVERAGE [3.0] Obj = 5.0 D=2.0	[23] TOTAL AVERAGE [5.75] Obj=5.75 D=0	[16] TOTAL AVERAGE [4.0] Obj=6.0 D=2.0	51	4.25
	[82] COLUMN TOTAL COLUMN AVERAGE [3.4]*	[92] COLUMN TOTAL COLUMN AVERAGE [3.8]*	[60] COLUMN TOTAL COLUMN AVERAGE [2.5]*	Row Total ÷ 12 = Row Average	

* Column Total ÷ 24 = Column Average

Obj. = 5.0; D = 1.6	Obj. = 5.0	Obj. = 4.8
	D = 1.2	D = 2.3

Results of the cluster analysis are presented below. For each cluster, the items are listed in the order in which they were added to the cluster. The letter to the left of the original item number indicates the DD&E matrix column in which the item was located. D= Development, E = Evaluation, and M = Dissemination/Marketing.

CLUSTER I - PUBLICATION, PRODUCTION, AND PUBLIC RELATIONS

M 60. Prepare specifications for audiovisual materials which will be used in the dissemination effort.

M 61. Write public relations scripts for film and slide shows.

M 62. Write press releases to disseminate information about a new product.

M 56. Make arrangements to secure copyrights and copyright clearances where needed.

D 13. Take steps to assure that such things as waivers, releases, copyright releases, or patent productions are secured when appropriate.

M 58. Design an effective public relations activity for a research and development organization or project.

M 70. Deliver an oral presentation to a group of more than 20 professional educators to disseminate information about a project or product.

D 21. Write a position paper justifying the development of an educational product.

D 12. Confer with production personnel to determine materials needed.

E 45. Prepare an article for publication in a scholarly professional journal.

D 9. Given funding resources, time and cost estimates, and project priorities, plan a budget.

D 1. Retrieve information on political, social, or economic factors which have a bearing on the analysis of an educational problem.

CLUSTER II - DISSEMINATION (PLANNING AND EVALUATION)

M 57. Outline factors which must be considered in disseminating information about an educational product designed for a specific target group.

M 66. Carry out an evaluation of the effectiveness of a demonstration of an educational product.

M 59. Plan interviews with potential users for the purpose of determining a market for your product.

M 55. Review alternatives for the design of a product in terms of possible problems in installing or maintaining the product.

M 65. Determine the thoroughness of distribution which occurred in dissemination of an educational product.

M 68. After product installation, interview users to determine if adequate information was provided about how to install and use the product.

E 36. Determine criteria for selection of field test sites for a specified educational product.

M 63. Prepare a sample of an educational product which can be presented for a specified target group in order to determine if the proposed product meets the group's needs.

M 54. Evaluate at least three different market research techniques applicable to a specific development.

M 71. Conduct demonstrations on the use of an educational product.

M 51. Use at least three different information services to obtain information about educational products similar to yours.

D 22. Discuss the development of an educational product with potential user-groups.

M 64. Prepare the specifications for a manual which describes maintenance and proper usage of an installed product.

D 24. Communicate product specifications to personnel who will be producing the product.

D 14. Confer with specialists when problems of production cannot be solved the job.

M 69. Interact with users to establish better understanding and cooperation in installing a new educational product or program.

CLUSTER II (continued)

M 67. Given a marketing study, identify: (a) the problem, (b) how the study was designed, and (c) the outcomes of the study.

M 49. Collect information on installation costs for your instructional product.

M 53. Identify the crucial characteristics of a target group which may influence the dissemination effort.

E 44. Given a report on the evaluation of an educational product, identify the purpose of the evaluation and the steps used in the process.

M 50. Design data collection forms for a marketing study of an educational product.

M 52. Construct an annotated bibliography to accompany a brochure describing the product being disseminated.

M 72. Translate quantitative or numerical information from a marketing study into verbal or narrative form.

D 23. Interact and contribute in a staff or consultant meeting.

CLUSTER III - DEVELOPMENT

D 11. Arrange learning activities in a sequence to facilitate learning or mastery of objectives.

D 15. Write exercises which the learner should do in order to master concepts or principles in an instructional unit.

D 19. Provided with product specifications, review a product and documentation on product development and field testing to determine if the specifications have been met.

D 8. Categorize instructional objectives in terms of a taxonomy (e.g., Bloom's taxonomy of the cognitive domain or Gagne's conditions of learning).

D 10. In producing specifications for instructional materials, determine an appropriate format for the materials.

D 16. Write copy for instructional materials from product specifications.

D 2. Locate existing methods or strategies which can be used in potential product development.

CLUSTER III (continued)

D 5. Given a problem statement, information on the history of the problem, objectives, and possible solutions, write a 2-page proposal for solving the problem, including a rationale for the approach and a development schedule.

D 3. Prior to conducting a survey of the literature, prepare a search strategy.

CLUSTER IV - FIELD TEST AND EVALUATION

E 42. Evaluate test instruments using data collected in try-out and revision cycles in order to recommend instrument revisions for the final field test.

E 37. Make revision in test instruments based on evaluation data.

D 17. Translate field test data into recommendations for action.

E 39. Prepare a test administration manual.

D 7. Provided with field test data on instructional materials, examine low gain scores and determine if they indicate problems in test construction or instructional materials.

E 32. Determine if new test instruments need to be developed by reviewing how well available tests fit the evaluation objectives.

D 20. Informally try out a development product with one or only a small group of subjects to observe and record how the test subjects use the materials, where and why they have difficulties, etc.

E 43. Determine the internal consistency reliability of a knowledge test instrument.

D 6. Provided with current theories of instruction, relate them to the formulation of a design for an educational product or program.

E 31. Analyze discrepancies between expected and actual test outcomes.

E 38. Make adjustments to test administration procedures when situational factors make such adjustments necessary, in a manner that will secure and protect the validity of the most important data.

CLUSTER IV (continued)

E 25. Prepare a coding scheme which will be used by a group of coders in preparing field test data for computer analysis.

E 33. Determine which standard procedure for establishing validity is best for your test instrument.

E 47. Prepare simple evaluation reports summarizing findings and interpretations of field test data.

E 34. Design a monitoring system that will provide data on the status of the operating system (such as actual versus intended outcomes, unmet needs, problems, etc.).

E 30. Formulate significant, answerable questions for an evaluation study.

E 35. Given a situation where a randomly assigned control group cannot be established, suggest feasible methods to control for extraneous variables that may confuse the evaluation results.

D 18. Conduct a case study of a program or project.

E 28. Design data collection procedures to maintain privacy or confidentiality in collecting, processing, and storing information.

E 26. Organize statistical data information into a meaningful presentation.

E 41. Determine if theoretical assumptions underlying various statistical techniques have been violated in analysis of data.

E 27. Interpret scatter plots.

E 40. Explain the importance of standardized procedures in conducting an interview.

D 4. In the context of conducting a survey of literature, scan and evaluate obtained information for relevance.

E 29. List the major factors which jeopardize the internal and external validity of a specified evaluation study.

ITEMS WHICH DID NOT APPEAR IN A CLUSTER

E 48. Prepare graphs to display numerical information.

E 46. Give a short speech or oral report.

REVISED DD&E DIAGNOSTIC INSTRUMENT

Items marked by an asterick (*) are new or revised items designed to provide better coverage in each of the three DD&E categories.

Development of Educational Products

Collecting Information

*1. Use bibliographic resources such as Research in Education and Current Index to Journals in Education to locate information supporting the need to develop an educational program or product.

2. Locate existing methods or strategies which can be used in potential product development.

*3. Conduct a search to determine if products exist which could meet your need(s) for instructional materials.

*4. In preparing a proposal for a development project, search for and select references which would support the rational and technical approach of the project.

Analyzing

5. Given a problem statement, information on the history of the problem, objectives and possible solutions, write a 20-page proposal for solving the problem, including a rationale for the approach and a development schedule.

*6. Use theories of instruction and learning to design an educational product or program.

*7. Analyze job or task requirements to determine objectives for an instructional program or product.

8. Categorize instructional objectives in terms of a taxonomy (e.g., Bloom's Taxonomy of the cognitive domain or Gagne's conditions of learning).

Planning

*9. Plan the budget and schedule for a development project.

10. In producing specifications for instructional materials determine an appropriate format for the materials.

11. Arrange learning activities in a sequence to facilitate learning or mastery of objectives.

*12. Design alternative instructional methods for attaining the same set of objectives.

Producing

*13. Prepare scripts for instructional films or sound filmstrips.

*14. Improve curricular materials by revising them according to instructional technology principles.

15. Write exercises which the learner should do in order to master concepts or principles in an instructional unit.

16. Write copy for instructional materials from product specifications.

Evaluating

*17. Review first draft materials to determine if they comply with specifications regarding objectives, sequencing, and content.

*18. Evaluate alternative methods of presenting instructional material/media and instructional methods to match them with instructional objectives and learner characteristics.

*19. Provided with product specifications, the test product, field test reports, and expert reviews, make recommendations regarding the nature and extent of revisions required.

*20. Evaluate the feasibility and risks associated with alternative approaches for redesigning a product that has failed to meet specifications.

Communicating

*21. Prepare a technical report stating the need, rationale, and proposed technical approach for developing an educational product or program.

*22. Prepare a memorandum which summarizes the actions taken and problems encountered in a meeting with your development team.

*23. Secure the services of, and meet with consultants to obtain their advice and recommendations regarding a development project.

*24. Make a formal, oral report to the administrators of your organization regarding the status of a development project.

Field Test and Evaluation

Collecting Information

25. Prepare a coding scheme which will be used by a group of coders in preparing field test data for computer analysis.

26. Organize statistical data into a meaningful presentation.

27. Interpret scatter plots.

28. Design data collection procedures to maintain privacy or confidentiality in collecting, processing and storing information.

Analyzing

29. List the major factors which jeopardize the internal and external validity of a specified evaluation study.

30. Formulate significant, answerable questions for an evaluation study.

31. Analyze discrepancies between expected and actual test outcomes.

32. Determine if new test instruments need to be developed by reviewing how well available tests fit the evaluation objectives.

Planning

33. Determine which standard procedure for establishing validity is best for your test instrument.

34. Design a monitoring system that will provide data on the status of the operating system (such as actual vs. intended outcomes, unmet needs, problems, etc.).

35. Given a situation where a randomly assigned control group can not be established, suggest feasible methods to control for extraneous variables that may confuse the evaluation results.

*36. In planning the evaluation of a new training program, determine the types of subjects which should be used.

Producing

*37. Revise a test instrument on the basis of data collected during a pilot test of the instrument.

38. Make adjustments to test administration procedures, when situational factors make such adjustments essential, in a manner that will secure and protect the validity of the most important data.

*39. Specify a set of procedures to be followed by evaluation personnel in administering test instrument.

40. Explain the importance of standardized procedures in conducting an interview.

Evaluating

41. Determine if theoretical assumptions underlying various statistical techniques have been violated in analysis of data.

*42. Evaluate proposed test instruments to determine if they are valid, reliable and appropriate for specific evaluation purposes.

*43. Critique a field test plan in terms of technical adequacy, feasibility and cost effectiveness.

*44. Review a draft field test report to determine if it is correct, complete and ready for release.

Communicating

*45. Prepare an article describing an evaluation study for publication in a professional journal.

*46. Give an oral report of the findings of an evaluation study.

47. Prepare simple evaluation reports summarizing findings and interpretations of collected data.

*48. Prepare graphs to display numerical information summarizing field test results.

Dissemination and Marketing

Collecting Information

49. Collect information on installation costs for your instructional product.

50. Design data collection forms for a marketing study of an educational product.

*51. Obtain information about strategies used to market educational products similar to yours.

*52. Retrieve information on political, social, and economic factors which may have a bearing on the dissemination and marketing of an educational product.

Analyzing

53. Identify the crucial characteristics of a target group which may influence the dissemination effort.

54. Evaluate at least three different market research techniques applicable to a specific development.

55. Review alternatives for the design of a product in terms of possible problems in installing or maintaining the product.

56. Make arrangements to secure copyrights and copyright clearances where needed.

Planning

57. Outline factors which must be considered in disseminating information about an educational product designed for a specific target audience.

58. Design an effective public relations activity for a research and development organization or project.

59. Plan interviews with potential users for the purpose of determining a market for your product.

60. Prepare specifications for audio-visual materials which will be used in the dissemination effort.

Producing

61. Write public relations scripts for film and slide shows.

62. Write press releases to disseminate information about a new product.

63. Prepare a sample of an educational product which can be presented to a specified target group in order to determine if the proposed product meets the group's needs.

*64. Prepare a brochure for users which describes maintenance and proper usage of an installed product.

Evaluating

65. Determine the thoroughness of distribution which occurred in dissemination of an educational product.

*66. Determine the effectiveness of using a demonstration to disseminate information to your target audience.

*67. Given the results of a marketing study, review alternative dissemination plans to determine which is most appropriate for the product and market studied.

68. After product installation, interview users to determine if adequate information was provided about how to install and use the product.

Communicating

*69. Interact with users to help them install a new educational product or program.

70. Deliver an oral presentation to a group of more than 20 professional educators to disseminate information about a project or product.

*71. Confer with different types of users about their problems in the use of and educational product.

*72. Translate technical information from a marketing study into a readable summary report.

INSTRUMENT #5

Jain, N. Communication Among Linkers. Chicago, IL: Paper presented at the Central States Speech Association Conference, April 1-3, 1976.

ERIC ED 120 833 - 12 pages

The content of this instrument must be inferred from a convention paper. Interviews and questionnaires were employed to collect data from a sample of 50 land grant university faculty members from seven academic departments, who were specifically assigned as Extension Specialists or Subject Matter Specialists in the Cooperative Extension Service on one site. Each person was asked to name three people who s/he seeks out most frequently for information and advice on technical matters about extension work. This sociometric information was used to constitute three variables: (1) opinion leadership (number of sociometric nominations received); (2) intra-departmental colleagues sought (number of persons named by the respondent who belonged to the same department as the respondent); and (3) extra-departmental colleagues sought (number of persons named who did not belong to the academic department of the respondent). A second sociometric questions asked each respondent to list colleagues (within the department and in other departments of the university) with whom s/he communicated most frequently about technical matters concerning extension work. The total number of nominations received was used as a (4) communication network centrality score. A third question asked each respondent to list individuals belonging to the department or to other departments with whom the respondent and her/his family met socially. The total number of colleagues listed by each respondent comprised a fifth variable, (5) social contacts with organizational colleagues. Data were also collected on (6) time (estimated average number of hours per week) spent reading professional and nonprofessional journals or periodicals; (7) organizational status; (8) organizational experience (number of years with present organization); and role commitment (percentage of work time devoted to performing a linking role in the state Cooperative Extension Service). The last three variables (status, experience, and role commitment) were employed as control variables.

Correlational analyses were focused on the relation of opinion leadership (number of times a person was mentioned by others as one who was sought out for technical information) to the other variables. The results of this analysis are displayed in Table 1 on the following page.

This analysis indicates that (1) the number of extra-departmental colleagues sought by a linker for information and advice is positively related to his/her opinion leadership; (2) the number of intra-departmental colleagues sought by a linker for information and advice is negatively related with his/her opinion leadership; (3) the amount of time spent by a linker in reading technical periodicals is positively related to his/her opinion leadership; (4) the degree of social contact of a linker with his/her organizational colleagues is positively related to his opinion leadership; and (5) approximately the same values are shown for the partial correlations, which hold organizational status, organizational experience, and role commitment constant.

TABLE 1

CORRELATION COEFFICIENTS BETWEEN COMMUNICATION CHARACTERISTICS AND OPINION LEADERSHIP OF LINKERS

(N = 50)

COMMUNICATION CHARACTERISTICS	CORRELATION WITH OPINION LEADERSHIP	
	Pearson Product-Moment Correlation	Partial Correlation[a]
Extradepartmental Colleagues Sought	.77 *	.71 *
Intradepartmental Colleagues Sought	-.45 *	-.32 *
Time Spent Reading Technical Periodicals	.19	.25 *
Communication Network Centrality	.55 *	.44 *
Social Contacts with Organizational Colleagues	.38 *	.30 *

[a] Holding organizational status, organizational experience, and role commitment variables constant.

* Significant at the $p<.05$ level; one-tailed test.

ATTACHMENT B

INSTRUMENTS WITHOUT DATA REPORTS

	INSTRUMENT	*DOMAIN/CONTENT AREA*	*PAGE*
6.	American Society for Training and Development (ASTD) "What Do Training and Development Professionals Really Do?"	Activities	33
7.	Cole B. Linker Competency Skill Assessment	Skills	41
8.	Gasaway and Erwin, Illinois State Department Office of Education Knowledge and Skills Self-Assessment Inventory	Knowledge Skills	47
9.	The NETWORK Diffusion Capability Self-Assessment Instrument	Activities	59
10.	The NETWORK Field Agent Skills/Traits/Behaviors	Knowledge Skills	65
11.	Research for Better Schools (RBS) Linker Training Needs Assessment Interview Schedule	Activities	69
12.	Rosenau, F. Priority Training Needs of Linking Agents	Skills	75
13.	Technical Assistance Brokerage Contractor, Capla Associates National Diffusion Network (NDN) Skills Identification	Skills Activities	87

INSTRUMENT #6

American Society for Training and Development. What Do Training and Development Professionals Really Do? Madison, WI: ASTD's Professional Development Committee, 1977.

This is a questionnaire prepared for ASTD members to find out what activities are really performed, as a basis for identifying basic roles and competencies. The results will be helpful in developing self-assessment tools and other professional development aids. The overall study is being sponsored by ASTD's Professional Development Committee (Box 5307, Madison, WI 53705) and conducted by the management consulting firm of Towers, Perrin, Forster, and Crosby.

WHAT DO TRAINING AND DEVELOPMENT PROFESSIONALS REALLY DO?

1. How has your organization's training and development activity changed during the past five years (e.g., expansion, new functions, decentralization)?

2. In what ways is your job changing (e.g., how will it be different five years from now)?

3. What is the most important skill or knowledge requirement for success as a training and development professional?

4. What is the most important behavioral requirement for success as a training and development professional (e.g., maintaining credibility, empathizing, being flexible, maintaining confidences, being creative)?

WHAT DO TRAINING AND DEVELOPMENT PROFESSIONALS REALLY DO?

009433

5. Which of the following BEST describes your responsibility? (please mark only one, even though others may apply)

- training/development practitioner ○
- personnel generalist ○
- full-time academician/teacher ○
- full time student ○
- vendor/supplier ○
- external consultant ○
- retired ○
- other ☐ ○

6. Approximately what part of your position is devoted to training and development?

- a very small part (20% or less) ○
- less than half ○
- about half ○
- more than half ○
- full time (100%) ○

7. How many other training and development professionals are employed in your organizational unit?

- none other ○
- 1 - 4 ○
- 5 - 25 ○
- more than 25 ○

8. How many of these persons report to you (directly or indirectly)?

- none other ○
- 1 - 4 ○
- 5 - 25 ○
- more than 25 ○

9. How many other employees report to you? (e.g., labor relations, compensation, clerical)

- none other ○
- 1 - 4 ○
- 5 - 25 ○
- more than 25 ○

10. Approximately where does your position report in your organization? (which best describes?)

- top-level management ○
- corporate staff, government department or administration ○
- major division/agency/operating company ○
- department or functional unit ○
- plant or office location ○
- only location of an organization ○
- other (e.g., special assignment) ○

11. What levels of people do you primarily serve in your work?

- managers ○
- supervisors/foremen ○
- professional/technical/sales ○
- other salaried ○
- hourly ○
- volunteers ○
- general external public/students ○
- other ☐ ○

12. Total size of the organization you serve:

- less than 1,000 ○
- 1,000 - 5,000 ○
- 5,000 - 15,000 ○
- 15,000 - 25,000 ○
- more than 25,000 ○

DIRECTIONS FOR MARKING

Use #2 or #2½ black lead pencil only - DO NOT use ink or ballpoint
Make heavy black marks that fill the circle completely
Erase cleanly any answer you wish to change - make no stray marks

Examples of PROPER marks ●○ ●○ ○●

Examples of IMPROPER marks ○⊗ ○⊘ ○◎

13. Size of total population served in your work (active and prospective training and development participants)

- less than 500 ○
- 500 - 1,000 ○
- 1,000 - 5,000 ○
- 5,000 - 15,000 ○
- 15,000 or more ○

14. Total annual sales (or annual budget, if public sector or non-profit) of your organization

- under $25 million ○
- $25 to $99 million ○
- $100 to $999 million ○
- over $1 billion ○

DEFINITION OF SCALES

To what extent does your work include the following activities? Consider the importance and the frequency of occurrence of each activity and mark the answer that best describes what you do.

0 - does not apply, is not part of my work
1 - a minor aspect of my work; occurs rarely and is unimportant
2 - a small part of my work
3 - a substantial part of my work (either frequent but not necessarily important or infrequent but highly important)
4 - a major part of my work
5 - a most significant part of my work (both highly frequent and important)

EXAMPLE: Construct questionnaires for analysis of training and development needs

DOES NOT APPLY	A MINOR PART	A SMALL PART	A SUBSTANTIAL PART	A MAJOR PART	A MOST SIGNIFICANT PART
0 ○	1 ○	2 ○	3 ●	4 ○	5 ○

DO NOT WRITE HERE

Constructing needs analysis questionnaires may be an important part of your work, but you may do it only once or twice a year. The appropriate response to this item, then, would be (3).

15. Construct questionnaires for analysis of training and development needs ⓪①②③④⑤
16. Conduct needs analysis interviews ⓪①②③④⑤
17. Establish objectives for programs (e.g., behavioral or learning objectives) ⓪①②③④⑤
18. Design specific programs to satisfy needs (e.g., management development, supervisory training, technical development) ⓪①②③④⑤
19. Determine program content (topics) ⓪①②③④⑤
20. Apply concepts of human development and growth in designing training and development programs ⓪①②③④⑤
21. Apply adult learning theory/instructional principles in developing program content and materials ⓪①②③④⑤
22. Evaluate alternative instructional methods (e.g., videotape, role-play, demonstration) ⓪①②③④⑤

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Item	0. Does Not Apply	1. A Minor Part	2. A Small Part	3. A Substantial Part	4. A Major Part	5. A Most Significant Part
23. Develop training materials (e.g., workbooks, exercises, cases)	○	○	●	○	○	○
24. Prepare scripts (for films, videotapes, etc.)	○	●	○	○	○	○
25. Write cases based on personal experiences or observation (research)	○	○	●	○	○	○
26. Develop programmed learning or computer-managed instructional materials	●	○	○	○	○	○
27. Evaluate "ready-made" courses or materials as to their applicability	○	●	○	○	○	○
28. Determine program structure (length, number of participants, choice of techniques, seating configurations)	○	●	○	○	○	○
29. Experiment with new training and development techniques (innovate or pilot test)	○	●	○	○	○	○
30. Develop program or courses in collaboration with colleges, universities, or other institutions	○	●	○	○	○	○
31. Design community development programs	○	○	○	○	○	○
32. Determine appropriate sequences of courses or programs (e.g., prerequisites, curricula)	○	●	○	○	○	○
33. Train or coach trainers/program leaders	○	●	○	○	○	○
34. Train managers and supervisors how to train	○	●	○	○	○	○
35. Develop criteria for selecting program participants	○	○	●	○	○	○
36. Develop exercises and tests for measurement of learning	○	●	○	○	○	○
37. Develop self-assessment tools (checklists, manuals, exercises)	●	○	○	○	○	○
38. Conduct training programs/activities	○	○	●	○	○	○
39. Decide whether to use an existing program, purchase an external program or create a new one to satisfy needs	○	○	○	○	○	○
40. Design questionnaires for evaluating training and development programs (feedback)	○	●	○	○	○	○
41. Revise materials/programs based on evaluation feedback	○	●	○	○	○	○
42. Analyze performance problems to determine any applicable training and development solutions	○	●	○	○	○	○

Item	0. Does Not Apply	1. A Minor Part	2. A Small Part	3. A Substantial Part	4. A Major Part	5. A Most Significant Part
43. What training and development techniques do you use? (please mark each technique)						
lecture with or without media	○	●	○	○	○	○
films	○	●	○	○	○	○
videotape/closed-circuit TV	●	○	○	○	○	○
discussions (cases, issues, etc.)	○	○	●	○	○	○
role playing	○	○	●	○	○	○
behavior modeling	○	●	○	○	○	○
simulation/advanced gaming	○	○	●	○	○	○
laboratory education/sensitivity training	●	○	○	○	○	○
programmed instruction/self instruction	●	○	○	○	○	○
coaching/counseling	○	○	●	○	○	○
on-the-job training/job instruction training	○	○	○	●	○	○
job rotation	●	○	○	○	○	○
internships/assistantships	○	●	○	○	○	○
organization development techniques	●	○	○	○	○	○
Other ☐	○	○	○	○	○	○
44. Identify training and development needs through questionnaire surveys (perceived needs, attitudes)	○	●	○	○	○	○
45. Identify training and development needs through interviews or informal discussions	○	○	○	●	○	○
46. Identify training and development needs through analysis of job requirements (job descriptions, task analysis, observation, etc.)	○	○	○	○	●	○
47. Identify skills and knowledge requirements of jobs	○	○	○	○	●	○
48. Evaluate training and development needs to set program priorities	○	○	○	●	○	○
49. Identify training implications prior to implementing other personnel programs (benefit programs, recruiter training, labor relations, etc.)	●	○	○	○	○	○
50. Identify the impact of training and development on other personnel programs or policies	○	●	○	○	○	○
51. Use organization development intervention techniques (e.g., team building, inter-group meetings)	○	●	○	○	○	○
52. Determine managerial/employee awareness of the availability of programs	○	●	○	○	○	○
53. Counsel individuals on career development	○	○	○	●	○	○
54. Establish and maintain good working relationships with managers as clients	○	○	○	●	○	○
55. Explain recommendations to gain acceptance for them	○	○	○	○	●	○

	0. Does Not Apply	1. A Minor Part	2. A Small Part	3. A Substantial Part	4. A Major Part	5. A Most Significant Part
6. Assist managers in implementing on-the-job training	●	○	○	○	○	○
7 Assist others in implementing training and development programs	○	●	○	○	○	○
8. Interpret data/statistics on training and development	●	○	○	○	○	○
9. Project future training needs (relating to management succession, organization change, etc.)	○	●	○	○	○	○
0. Organize and staff training and development function or department	○	●	○	○	○	○
1. Make formal management presentation plans for training and development programs and projects	○	●	○	○	○	○
2. Prepare budgets (plans) for training and development programs and projects	○	●	○	○	○	○
3. Maintain information on training and development costs and/or benefits	○	○	●	○	○	○
4. Assess performance before and after training to measure training effects	○	○	●	○	○	○
5. Establish/maintain a library (training resources, career development information)	○	○	○	●	○	○
6. Identify and evaluate external training and development programs	○	○	○	●	○	○
7 Prepare/disseminate internal and external training and development program announcements	○	●	○	○	○	○
8. Arrange for participation in external training and development programs	○	●	○	○	○	○
9 Design or use information system for data on programs, projects, participants, instructors, materials, etc.	●	○	○	○	○	○
0 Design data collection procedures to maintain privacy or confidentiality	●	○	○	○	○	○
1. Apply criteria for selecting program participants	○	○	●	○	○	○
2. Maintain records of participation in training and development programs	○	●	○	○	○	○
3 Administer tuition reimbursement program	○	●	○	○	○	○
4. Secure necessary copyrights or reprint permissions	○	○	○	●	○	○
75. Identify equipment and supplies required for training and development program	○	○	●	○	○	○
76. Evaluate proposals from outside consultants	●	○	○	○	○	○
77. Obtain (contract with) outside consultants	○	●	○	○	○	○
78. Obtain internal instructors/program resource persons	○	○	○	●	○	○
79. Evaluate internal instructors/program resource persons	○	○	○	●	○	○
80. Obtain/hire external instructors/program resource persons	○	○	●	○	○	○
81. Evaluate external instructors/program resource persons	○	○	●	○	○	○
82. Arrange program logistics (facilities, lodging, meals, communications, etc.)	○	●	○	○	○	○
83. Supervise production of training and development materials (slides, films, cassettes, manuals, etc.)	○	●	○	○	○	○
84. Contract with outside vendors (purchase materials, programs)	○	●	○	○	○	○
85. Hire professionals to record cassettes	●	○	○	○	○	○
86. Prepare artwork and copy for slides	●	○	○	○	○	○
87. Operate audio-visual equipment	●	○	○	○	○	○
88. Counsel with employees on training and development matters	○	○	●	○	○	○
89. Counsel with managers and supervisors on training and development	○	○	○	○	●	○
90. Supervise the work of others (plan, organize, schedule, etc.)	○	○	○	○	●	○
91. Keep abreast of training and development activities in other organizations (e.g., competitors, other local firms)	○	○	○	●	○	○
92. Communicate with government personnel on training and development matters (e.g., meetings, conversations, correspondence)	○	○	○	○	●	○
93. Keep abreast of EEO/Affirmative Action regulations and related training and development practices	○	●	○	○	○	○
94. Keep abreast of OSHA regulations and related training and development practices	●	○	○	○	○	○

	0. Does Not Apply	1. A Minor Part	2. A Small Part	3. A Substantial Part	4. A Major Part	5. A Most Significant Part
95. Attend seminars/conferences on training and development (e.g., ASTD meetings)	⓪	①	●	③	④	⑤
96. Keep abreast of training and development concepts, theory, techniques, and approaches	⓪	①	②	●	④	⑤
97. Attend seminars/conferences for your own professional development	⓪	①	●	③	④	⑤
98. Interpret statistics and data (e.g., scatter plots, time series)	●	①	②	③	④	⑤
99. Present statistics and data (e.g., charts, tables)	●	①	②	③	④	⑤
100. Write reports or manuals relating to training and development	⓪	①	②	③	●	⑤
101. Write proposals for programs or projects	⓪	①	②	③	●	⑤
102. Write speeches relating to training and development	⓪	①	②	●	④	⑤
103. Write articles (for periodicals, internal publications)	⓪	①	②	③	●	⑤
104. Write memos or announcements	⓪	①	②	③	④	●
105. Administer achievement tests/aptitude tests/questionnaires	●	①	②	③	④	⑤
106. Other training and development activities you perform: A.	⓪	①	②	③	④	⑤
B.	⓪	①	②	③	④	⑤
C.	⓪	①	②	③	④	⑤
D.	⓪	①	②	③	④	⑤

107. Which of the following BEST describes your training and development specialization?

- generalist ●
- trainer/instructor ○
- career development/counselor ○
- organization development ○
- consultant ○
- community development ○
- other ____ ○

108. How many years have you been a training and development professional?

0 - 4 years ○	11 - 24 years ○
5 - 10 years ●	25 years or more ○

109. How many years have you been in your present organization?

0 - 4 years ○	11 - 24 years ○
5 - 10 years ○	25 years or more ○

110. What is the zip code where you work?

Question 111 Your Major Field of Study	
High School	
College	
Graduate	

ZIP CODE				
⓪	⓪	⓪	⓪	⓪
①	①	①	①	①
②	②	②	②	②
③	③	③	③	③
④	④	④	④	④
⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨

111. Indicate your level of formal education attained and fill in boxes above for major field of study:

some high school ○	bachelor's degree ○
high school graduate ○	some graduate study ○
some college ○	master's degree ○
associate degree ○	doctorate ●

112. What is your age?

Under 25 ○	45 - 54 ●
25 - 34 ○	55 - 64 ○
35 - 44 ○	65 or over ○

113. What is your salary level?

under $5,000 ○	$25,000 - $35,000 ○
$5,000 - $14,999 ○	over $35,000 ●
$15,000 - $24,999 ○	

114. What is your sex?

female ○ male ●

115. What is your race?

- White ○
- Black ○
- Hispanic ○
- Asian or Pacific Islander ○
- American Indian or Alaskan native ○
- Other ____ ○

DO NOT WRITE IN THIS SPACE

SPECIAL CODE										COMPUTER USE ONLY					
1		2		3		4		5							
⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①	①	①	①	①	①	①	①	①	①
②	②	②	②	②	②	②	②	②	②	②	②	②	②	②	②
③	③	③	③	③	③	③	③	③	③	③	③	③	③	③	③
④	④	④	④	④	④	④	④	④	④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤	⑤	⑤	⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥	⑥	⑥	⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦	⑦	⑦	⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧	⑧	⑧	⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨	⑨	⑨	⑨	⑨	⑨	⑨	⑨	⑨	⑨

THANK YOU!

116. What new requirements do you feel are emerging as important for training and development professionals?

117. Which of the following best describes your personal long-term career objective?

- ☐ training and development specialist or manager
- ☐ other personnel responsibilities (e.g., personnel director, labor relations)
- ☐ other organizational functions (e.g., marketing, production)
- ☐ consultant (internal or external)
- ☐ educator/teacher/academician
- ☐ other: ____________

118. Identify a specific resource that has been most useful in *your own development* as a training and development professional. (e.g., a course, seminar, book)

119. Please give examples of any behavior you have observed which you consider *unethical or improper* for a training and development professional.

120. What is the nature of the industry or organization where you work? (which *best* describes?)

- ☐ insurance
- ☐ banking/savings & lending institution
- ☐ retailing
- ☐ communications/broadcasting/publishing
- ☐ restaurants/food/hotel
- ☐ recreation/amusement
- ☐ transportation
- ☐ commercial aviation
- ☐ utilities
- ☐ agriculture/natural resources
- ☐ mining
- ☐ metals
- ☐ petroleum
- ☐ pulp and paper/forest products
- ☐ construction
- ☐ beverages/bottling/brewing
- ☐ chemicals/pharmaceuticals
- ☐ computers/data processing
- ☐ automotive
- ☐ electrical/electronic
- ☐ textiles
- ☐ industrial—general
- ☐ health care
- ☐ educational institution
- ☐ non-profit (voluntary, foundation, clergy)
- ☐ trade/professional association
- ☐ law enforcement
- ☐ state and local government
- ☐ federal government
- ☐ military
- ☐ other____________
- ☐ other____________

121. Please provide any additional comments or information that would be useful.

INSTRUMENT #7

Cole, B. "Linker Competency Skill Assessment." In Cole, B., Linkage Training for Regional Education Service Agencies. Portland, OR: Northwest Regional Educational Laboratory, 1977.

Linker Competency Skill Assessment rates a list of appropriate linker skills from skill competence one has now to need further development. It is reproduced by courtesy of Northwest Regional Educational Laboratory, 710 S.W. Second Avenue, Portland, OR 97204.

IMPROVING TEACHING COMPETENCIES PROGRAM

Linker Competency Skill Assessment

Below is a representative list of appropriate linker skills. Beside each skill are two rows. The top row represents the degree for which you believe you have the skill competence now, the bottom row represents the degree to which you believe you need further development in the skill. It is possible to feel the skill is developed sufficiently and little further development is needed. This is illustrated below for "problem identification."

	High						Low	
	7	6	5	4	3	2	1	
"Problem identification"		X						Have
						X		Need Further Development

Conversely, it is possible to have a relatively high sense of skill competence and still feel a need for more. In this case, the response might be:

	High						Low	
	7	6	5	4	3	2	1	
"Problem identification"			X					Have
	X							Need Further Development

Thus, consider "have the skill-competence" and "need the skill" as two independent factors. Rate each of the below areas in terms of your perception of skill competence and skills needed.

APPROPRIATE JOB SKILLS

	High						Low	
	7	6	5	4	3	2	1	
PROBLEM SOLVING SKILLS								Have Need
Problem identification								Have Need
Diagnosis through the force field technique								Have Need
Force field analysis and data gathering								Have Need
Deriving implications and action alternatives								Have Need
Brainstorming								Have Need
Planning for action								Have Need
Evaluation								Have Need
Application of problem solving skills								Have Need
Team planning								Have Need
Others								Have Need
INTERPERSONAL COMMUNICATION SKILLS								Have Need
Listening and saying skills								Have Need
Behavior description								Have Need
Describing and accepting feelings								Have Need
Giving and receiving feedback								Have Need
Helper and helpee skills								Have Need
One-way and two-way communication								Have Need

APPROPRIATE JOB SKILLS	High							
	7	6	5	4	3	2	1	
Communicating under pressure								Have Need
Others								Have Need
GROUP PROCESS SKILLS								Have Need
Observing and analyzing group interaction								Have Need
Dealing with clear and unclear goals								Have Need
Making decisions in groups								Have Need
Leadership roles and group productivity								Have Need
Analyzing leadership styles								Have Need
Dealing with group pressure, conformity and influence								Have Need
Dealing with conflict								Have Need
Utilization of group resources								Have Need
Spotting and dealing with hidden agendas								Have Need
Increasing awareness of helping and hindering behaviors								Have Need
Identifying various effects of leader behaviors on group interaction								Have Need
Giving and receiving help								Have Need
Applying criteria to identification of organizational issues								Have Need
Diagnosing individual and group needs in the area of process skills								Have Need
Applying criteria in writing a problem statement								Have Need

	High						Low	
APPROPRIATE JOB SKILLS	7	6	5	4	3	2	1	
Identifying priorities for skill practice exercises								Have Need
Applying guidelines for conducting skill practice exercises								Have Need
Evaluating acquisition of skills								Have Need
Others								Have Need
INTERPERSONAL INFLUENCE SKILLS								Have Need
Defining my need to influence								Have Need
Face to face influence								Have Need
Feelings and the process of interpersonal influence								Have Need
Values in interpersonal influence								Have Need
Congruence of intentions and actions								Have Need
Influence and non-verbal behaviors								Have Need
Helping relationships								Have Need
Identifying own characteristic styles of influencing								Have Need
Game playing awareness								Have Need
Assessing group norms								Have Need
Others								Have Need

INSTRUMENT #8

Gasaway and Erwin. Knowledge and Skills Self-Assessment Inventory. Springfield, IL: Illinois State Department Office of Education, 1977.

This is an assessment inventory prepared by the Illinois Office of Education for use with State Department field team members prior to establishing training programs for them. It is reproduced by courtesy of the Illinois Office of Education, Program Planning and Development Division, 100 North First Street, Springfield, IL 62777.

KNOWLEDGE AND SKILLS
SELF-ASSESSMENT INVENTORY

PREPARED BY STAFF DEVELOPMENT
CARL GASAWAY AND CLIFF ERWIN

Program Planning And Development
Illinois Office of Education
100 North First Street
Springfield, Illinois 62777

KNOWLEDGE AND SKILLS
SELF-ASSESSMENT INVENTORY

NAME

TEAM

DATE

This inventory is designed to stimulate your thinking about and assist you in assessing your level of knowledge and skill development necessary for consulting with administrators, teachers and other school personnel.

DEFINITIONS

Please refer to the following working definitions when responding to each activity.

CONSULTING is the process of working with clients in a manner which focuses on the relationships and events which occur when people are working on a task. The stance is primarily that of facilitating and assisting clients as they identify needs or issues and seek solutions.

KNOWLEDGE is the particular existing (present) range of one's information or acquaintance with facts.

SKILL is the ability to use one's knowledge effectively and readily in the execution or performance of some action.

INSTRUCTIONS

This instrument is designed to assist you in assessing your current level of knowledge and skill development in 10 areas.

Each skill is defined and includes a rating scale with values of 1 through 6. Each value is defined below:

A. Scale Values

1. None. No understanding of the concept whatsoever or totally unable to perform the action.

THIS MATERIAL MAY BE REPRODUCED WITH THE PERMISSION OF THE ILLINOIS OFFICE OF EDUCATION - LEA SERVICES DEPARTMENT

2. Very Low. Have enough understanding to participate quietly and usefully observe in situations.

3. Low. Have enough understanding and capability to follow the lead of others and support others.

4. Moderate. Have enough understanding and capability to actively contribute in average pressure situations.

5. High. Have enough understanding and capability to function alone in an effort without support from others.

6. Very High. Have enough understanding and capability to lead/teach others in an effort.

B. After you have received clarity of the above definitions, please respond to each activity in all 10 skill areas by circling the scale number (value) that best describes your knowledge and skill level.

C. After you have responded to the specific activities of all 10 skill areas, compute the composite rating for each area. This can be accomplished by using an arithmetic average.

D. Transfer the average rating for each of the 10 skill areas to the individual profile sheet. Retain these forms for later use.

SKILL AREA 1

COMMUNICATION SKILLS - Those listening and speaking skills which a consultant uses in all phases of working with administrators, teachers and other LEA personnel.

Please rate your level of knowledge and skill in each of the following areas/ activities:

ACTIVITY	KNOWLEDGE	SKILL
	(Do I Know What to Do?)	(How Well Can I Do It?)
1. Listening attentively	1 2 3 4 5 6	1 2 3 4 5 6
2. Paraphrasing to ensure understanding of what others are saying	1 2 3 4 5 6	1 2 3 4 5 6
3. Checking out for clarity and understanding by client	1 2 3 4 5 6	1 2 3 4 5 6
4. Identifying patterns of communication (norms, one-and-two-way communication, etc.)	1 2 3 4 5 6	1 2 3 4 5 6
5. Identifying non-verbal cues	1 2 3 4 5 6	1 2 3 4 5 6
6. Giving and receiving feedback	1 2 3 4 5 6	1 2 3 4 5 6
7. ____________________ ____________________	1 2 3 4 5 6	1 2 3 4 5 6
8. ____________________ ____________________	1 2 3 4 5 6	1 2 3 4 5 6

Indicate your average rating for knowledge and skill in this area for entry on the Individual Skills Profile.	1 2 3 4 5 6	1 2 3 4 5 6

SKILL AREA 2, ENTRY/INTERVENTION SKILLS

Conscious behavior by a consultant which helps an individual or group to move in a specific direction.

1. Establishing rapport and credibility
2. Setting a conducive environment (climate)
3. Clarifying my role as a consultant
4. Collecting data to determine need for service
5. Deciding whether to continue or to negotiate a new resource for provision of service
6. Finalize mutual expectations and commitments
7. Translating an issue into a problem statement for the client
8. Pointing out that a client/group is attending to several problems simultaneously rather than sticking to one problem at a time
9. Point how the client/group utilizes its resources
10. Pointing out dysfunctional behaviors which keep the group from achieving a cohesive working relationship
11. Verbally reinforcing client/group behaviors such as gatekeeping, agenda building, etc.
12.
13.

SKILL AREA 3, DIAGNOSTIC SKILLS

(The consultant acts as a process observer) - Those skills which enable a consultant to assess a situation so that he/she can make appropriate interventions to aid the client(s).

Note: This section is based upon the assumption that the consultant will describe his/her role to the group prior to providing service.

1. Observing and analyzing leadership styles
2. Observing and analyzing decision making modes

3. Observing and analyzing how internal resources are utilized
4. Determining when the use of specific assessment instruments (surveys, teacher methodology, morale, etc.) is appropriate
5. Observing and analyzing group norms
6. Observing and analyzing the group's overall effectiveness
7.
8.

SKILL AREA 4, GROUP FACILITATING SKILLS

(The consultant acts as a facilitator while the group functions) - Those skills which enable a consultant to help a group identify its blocking and promoting forces, its problem-solving techniques and its other processes.

1. Helping groups to identify issues (task vs. relationship)
2. Helping groups to clarify decision-making modes
3. Helping groups to analyze leadership styles
4. Helping groups to deal with group pressure, conformity, and influence
5. Helping groups to deal with conflict
6. Helping groups to identify and deal with hidden agendas
7. Helping groups to utilize their individual resources
8. Helping groups to evaluate their task effectiveness
9.
10.

SKILL AREA 5, PROBLEM SOLVING

Those skills which a consultant uses to help his/her client(s) eliminate or cope with a situation identified as a problem.

1. Identifying problems clearly and specifically
2. Using assessment techniques

3. Using brainstorming techniques
4. Using Force Field Analysis
5. Generating solutions and determining implications
6. Planning for action (Implementation)
7. Conducting evaluation
8.
9.

SKILL AREA 6, INFLUENCE/POWER

The ability of one person to affect the attitude, behaviors or ideas of others. The ability of one person to control the behavior of another person by reason of position or authority.

1. Identifying my own style of influencing and my need to influence
2. Being aware of game-playing
3. Assessing group norms
4. Identifying congruence of intentions and actions
5. Identifying nonverbal behaviors that influence others
6. Understanding and helping the client(s) to understand power bases
7. Coping with and helping the client(s) to cope with feelings of power and powerlessness
8. Diagnosing and helping client(s) to diagnose power struggles
9.
10.

SKILL AREA 7, DESIGN SKILLS

The skills of putting together necessary components and sequencing them in a logical flow to meet a client's need for a particular service.

1. Understanding the need to involve various groups (teachers, students, community members, etc.)

2. Using assessment techniques
3. Identifying goals
4. Prioritizing
5. Understanding the relationship among components of the planning process
6. Budgeting/Accounting
7. Planning Programs
8. Planning evaluation strategies
9.
10.

SKILL AREA 8, RESOURCE UTILIZATION

The process of using those knowledges and skills available to a consultant in the form of personnel, materials, time and money to help his/her client(s) solve problems.

1. Diagnosing information and resource needs of clients that cannot be met with internal-to-client resources
2. Using systematic procedures and established channels to bring resources to clients (retrieval skills)
   a. Using internal agency resources (PP&D, IRDN, etc.)
   b. Using external resources (universities, professional organizations, etc.)
3. Using knowledge transformation skills
4. Using adaptation/modification skills and understandings
5.
6.

SKILL AREA 9, CONFLICT MANAGEMENT/UTILIZATION

The use of conflict situations as a source of learning for the consultant to become more effective in working with individuals and groups within the LEA's.

1. Understanding basic causes of conflicts

2. Diagnosing conflict situations
3. Identifying alternative ways of coping with conflict
4. Using third-party conflict resolution
5.
6.

SKILL AREA 10, EVALUATION SKILLS

Those skills which enable a consultant to determine the quality of his/her task and relational efforts with clients.

1. Using formative evaluation techniques
2. Using summative evaluation techniques
3. Documenting evaluation results
4. Using evaluation results in decision-making
5. Planning/designing evaluation techniques
6.
7.

INDIVIDUAL SKILLS PROFILE
PRIORITY SHEET

NAME ____________________

TEAM ____________________

DATE ____________________

Instructions: Prioritize the ten consultant skill areas based on your need for additional knowledge or skill development in each area.

	KNOWLEDGE	SKILL
Priority #1		
Priority #2		
Priority #3		
Priority #4		
Priority #5		
Priority #6		
Priority #7		
Priority #8		
Priority #9		
Priority #10		

DATE____________________

TEAM____________________

INDIVIDUAL SKILLS PROFILE

		COMMUNICATION SKILLS	ENTRY/INTERVENTION SKILLS	DIAGNOSTIC SKILLS	GROUP FACILITATING SKILLS	PROBLEM SOLVING	POWER/INFLUENCE SKILLS	DESIGN/PLANING SKILLS	RESOURCE UTILIZATION SKILLS	CONFLICT MGMT. UTILIZATION SKILLS	EVALUATION SKILLS
PRIORITY											
KNOWLEDGE	6										
	5										
	4										
	3										
	2										
	1										
PRIORITY											
SKILLS	6										
	5										
	4										
	3										
	2										
	1										

INSTRUMENT #9

The NETWORK. Diffusion Capability Self-Assessment Instrument. Andover, MA: The NETWORK, 1977.

This instrument is reproduced by courtesy of the NETWORK, 290 South Main Street, Andover, MA 01810.

DIFFUSION CAPABILITY SELF-ASSESSMENT INSTRUMENT

The NETWORK
290 South Main Street
Andover, MA 01810

RATIONALE: This instrument is designed to provide the Technical Assistance contractors with an informal indication of the needs of self-assessed diffusion capabilities of each of the 18 compensatory projects. This information will be used immediately in designing the early October training event and identifying resource agencies and individuals.

INSTRUCTIONS: On the following pages, you will find a fairly comprehensive listing of activities and tasks typically facing a locally-developed program gearing up for widespread diffusion work. Beneath each item, jot a couple of sentences assessing your *project's capability* in that area and likely *need for outside assistance* (in further refining that capability). In cases where you feel you will need *considerable technical assistance* from outside your project, *please circle the number* of the item.

Your Name: ______________________________

Project Name: ______________________________

Address: ______________________________

____

____

Telephone Number: ( ) ______________________________

Name of person other than yourself who can be contacted for follow-up:

____

1. Developing, using, and evaluating an overall diffusion plan which includes objectives, budget planning, an activities timeline, staff assignments, and plans for identifying local and other funds and resources to extend diffusion project salaries, travel, and materials.

2. Identifying appropriate target audiences for your project.

3. Creating or redesigning awareness materials such as brochures, news releases, indepth descriptions, and audiovisual presentations.

4. Redesigning or adapting various project components to enhance their replicability in adopter sites.

5. Conducting awareness sessions for a variety of audiences at the local, state, and regional levels.

6. Rearranging your schedules, facilities, and staff to function as a demonstration site providing an optimal experience for visiting educators while minimally disrupting the students' learning environment.

7. Negotiating your involvement with potential adopters and setting mutual expectations.

8. Performing organizational diagnoses of adopting school systems in order to identify key personnel and subgroups and eventually obtain their commitment.

9. Confirming availability and suitability of needed facilities, resources, materials, and staff at the adoption site.

10. Planning and conducting project-focused training sessions designed to meet the needs of participating school personnel.

11. Conducting an analysis of project materials and procedures to determine the degree and direction of their adaptability to meet local needs and constraints.

12. Helping to install the program on a trial or pilot basis, and, in some cases, conducting an evaluation of the trial adoption's effectiveness.

13. Creating an implementation plan for use by the local adopter which includes objectives, activities, staff assignments, budget control, and a timeline.

14. Developing support mechanisms within the school to complement the new program.

15. Developing documentation and evaluation procedures for your own diffusion activities.

16. Planning and conducting follow-up technical assistance to local school systems.

17. Building and maintaining effective working relationships with adopter sites, state education agencies, state facilitators, and the National Diffusion Network.

18. Additional comments?

INSTRUMENT #10

The NETWORK. Field Agent Skills/Traits/Behaviors. Andover, MA: The NETWORK, 1977.

This self-rating scale is an illustrative example of an instrument that has been tailored to the context of a specific educational linking agent project, the Reading Consortium. There is no reported validation data. It is reproduced here by courtesy of the NETWORK, 290 South Main Street, Andover, MA 01810.

FIELD AGENT SKILLS/TRAITS/BEHAVIORS

The following is a list of behaviors, traits and skills which we believe are important ones for Linking Agents (and other Staff) to possess and demonstrate. It is by no means all-inclusive; please add to the list.

We think the list may be helpful a) as a guide, b) as a self-diagnostic instrument.

Skills/behaviors/traits: Self-Rating

(Suggested scale:
1. I need lots of work on this one
2. I could use some polishing on this one
3. I am rather strong in this dimension)

	DATES		
	June, 1976	August, 1976	
1. A field agent relates well to clients.			
a. Has an easy manner			
b. Empathizes with client			
c. Is perceived as non-threatening			
d. Uses a common vocabulary			
e. Develops the proper relationship with power people (e.g. respectful but not intimidated)			
f. Demonstrates good communication skills--e.g.			
--Good eye contact			
--Paraphrases			
--Is a good listener			
g. Understands client's frame (s) of reference			

h. Deals with frustration in a non-punitive way.

i. Other:

2. A field agent is helpful.

   a. Offers advice when appropriate

   b. Witholds advice when appropriate

   c. Asks "good" questions

   d. Describes what s/he's heard/learned

   e. Moves toward closure

   f. Outlines next steps

   g. Gets client agreement on (d), (e) and (f)

   h. Sets expectations

   i. Makes useful and appropriate contextual remarks (e.g., "Often when people in organizations find themselves in such situations they...")

   j. Describes the purpose of contact, e.g.
   --expected outcomes
   --role of self

   k. Helps client describe/state problems

   l. Helps generate appropriate possible solutions

   m. Other:

3. A field agent is knowledgeable.

   a. Knows, can describe The Consortium

   b. Knows about other NIE-funded programs

   c. Knows about other NETWORK programs

   d. Knows the context in which the organization exists (i.e.; has gathered information about the school, has read local newspaper)

   e. Knows, understands organizations their structures and problems

   f. Knows organization theory

   g. Knows other appropriate information e.g.--
   --the Reading field
   --the specific SEA relationships

--with the home agency Education and State politics
--National Diffusion Network
--Title III/IV

h. Other:

--Right to Read
--International Reading Association

4. A field agent documents and describes situations/visits/people/places.

   a. attempts to learn something new with each contact

   b. Writes clearly and precisely about what she/he has learned

   c. See and describes--
      --the organization
      --the contexts (systems, subsystems)
      --people
      --behavior
      --influences

   d. Takes an objective, detached perspective on events in which she/he has been personally involved.

   e. Can draw implications, generalizations from limited data, while recognizing and identifying possible misreadings.

   f. Other:

5. A field agent takes appropriate next steps. She/he knows how to--

   a. Ask for help (from colleagues & others)

   b. Use help

   c. Prepare follow-up letters

   d. Recommend next steps

   e. Come up swinging after a rough meeting

   f. Identify and use support resources of the Consortium

   g. Other:

6. Other:

Some basic consultant HOMILIES:

**"No solution gets accepted in the absence of a relationship." R. Harris
**"Positive reinforcement works well with clients." M. McConkey
**"I never helped a client I didn't like." W. Rogers

INSTRUMENT #11

Research for Better Schools, Inc. *Linker Training Needs Assessment Interview Schedule*. Philadelphia, PA: Research for Better Schools, Inc.

The RBS training needs assessment interview is an informal one which is designed to obtain training needs information through a progressively focused discussion that begins with an examination of linking roles and then moves to an examination of comprehensive planning assistance activities, to identification and description of the specific tasks that are related to these activities, then to task knowledge and skill requirements, and finally to a discussion of training needs. The interview thus "anchors" training needs to the specific role, activity, and task that are relevant to each interviewee.

The attached three worksheets were used by RBS interviewers to record the responses of state education agency staff concerning their linking agent role responsibilities, activities, tasks, and training needs. The interviews were informal; consequently there is no prescribed set of questions. To begin the interview, each person was told the purpose of the interview (to better understand what the person was now doing in their work with schools and to discover where training might be most helpful) and was then asked to briefly describe the general kinds of work they performed with local school districts. After this warm-up question, the interviewee was asked which kinds of roles (see Worksheet #1) were involved in his or her work with local schools: information linker, program facilitator, technical assistant, or process enabler. Each role was described briefly so that the interviewee understood the labels. For each role the interviewee performed, a separate worksheet #1 was completed to identify the subject content foci and to obtain specific descriptions of role responsibilities. ("Please indicate the areas of focus of your work." "Now would you tell me exactly what you do.")

On Worksheet #2, respondents were asked to indicate what specific activities they performed, and then to specify for each activity with whom (e.g., teachers, counselors, curriculum coordinators) they worked, what they did, and how they did it.

Worksheet #3 was used in conjunction with Worksheet #2. The interviewer selected an activity that had been checked and described on Worksheet #2. The interviewee was asked to describe the specific tasks related to that activity. ("Think of a school district that you worked with recently; what exactly did you do? What tasks did you perform to accomplish this activity?") Each activity checked on Worksheet #2 was examined in turn. After the tasks were described, the interviewer probed for task knowledge (know about) and skill (know how to) requirements. After these were recorded, the interviewer asked, "Tell me what you are interested in in terms of training." Areas where the interviewer indicated interest in obtaining training were marked and annotated based on further probes concerning the type of training desired, reasons for wanting this kind of training, etc. At the end of the interview, the interviewer showed each person what they had recorded and asked them to especially look over the tasks, the list of task requirements, and the areas where training interest was indicated. Finally, interviewees were asked if there were any other training needs that had not been mentioned.

ROLE (Complete a copy of Worksheet #1
for each role)

WORKSHEET #1

☐ Information Linker
☐ Program Facilitator
☐ Technical Assistant
☐ Process Enabler

NAME ____________________

POSITION ____________________

	FOCUS	ROLE RESPONSIBILITIES
____	1. Curriculum	
____	2. Instruction	
____	3. Personnel	
____	4. Organization	
____	5. Community Relations	
____	6. Budgeting	
____	7. Supervision	
____	8. Facilities	
____	9. Resource Management	
____	10. Scheduling	
____	11. Training	
____	12. Policy Making	
____	13. Leadership	

WORKSHEET #2

NAME ______________________

ACTIVITIES

POSITION ______________________

☐ a. Problem Clarification

☐ b. Goal Setting

☐ c. Needs Assessment

☐ d. Data Analysis

☐ e. Determining Improvement Requirements

☐ f. Identifying Alternatives

☐ g. Selecting Means of Improvement

☐ h. Developing Means of Improvement

☐ i. Implementation

☐ j. Evaluation

☐ k. Communication

☐ l. Conflict Management

☐ m. Research

☐ n. Organizational Development

☐ o. Other (Specify)

ROLE ____________________

FOCUS ____________________

ACTIVITY ____________________

NAME ____________________

POSITION ____________________

WORKSHEET #3

DESCRIPTION OF SERVICES PROVIDED

TASKS RELATED TO ACTIVITY	TASK REQUIREMENTS	
	Know About	Know How To
1.		
2.		
3.		
4.		
5.		

WORKSHEET #3 (continued)

TASKS RELATED TO ACTIVITY	TASK REQUIREMENTS	
	Know About	Know How To
6.		
7.		
8.		
9.		
10.		

INSTRUMENT #12

Rosenau, F. Priority Training Needs of Linking Agents. San Francisco, CA: Far West Laboratory for Educational Research and Development, 1977.

A survey-type instrument was prepared by Far West Laboratory under contract to the National Institute of Education to begin to sense nationwide training priorities as perceived by selected managers of dissemination-type activities, by selected linking agents, and by dissemination researchers.

Note: The dots and lines are not part of the form, but rather summarize data based on a small sample of linking agents and their supervisors. Dots indicate modal response for each item. Bars indicate that there was no appreciable difference across the two (or three) categories the bar crosses.

PRIORITY TRAINING NEEDS OF LINKING AGENTS

1. Frequency of Performance--your opinion of how often an educational linking agent would use the specific skill on the job.
2. Criticality--your opinion of the need today for training any educational linking agents in the specific skill.
3. Improvement Needed--your opinion of need for your own staff to raise present skill level.

eptember 19, 1977
SR:uh

PROBLEM ANALYSIS SKILLS	Frequency of Performance			Criticality for Effectiveness			Improvement of Our Staff		
	HIGH	MEDIUM	LOW	HIGH	MEDIUM	LOW	HIGH	MEDIUM	LOW
Helping LEAs clarify problems; verifying perceived educational problems	●			●				●	
Identifying the key people who should be involved in problem definition activity at a specific site				●			●		
Documenting the process of needs assessment and group problem solving, including description of problems and successes		●		●					
Assisting in translating needs assessment information into general problem statement for communication to key school/community personnel				●					
Assisting local staff in developing or refining criteria for screening or selecting R&D outcomes					●				
Determining need for and assisting in search for existing management tools that can be used to train and help local personnel to conduct in-depth analyses of their need	●			●					
Assisting local staff/community in producing an analysis of site-specific problems based on empirical examination of the local situation and in establishing priorities regarding needs/problems	●			●					
Identifying professionals who can assist in the use of group problem-solving techniques				●					
Assisting local site in selecting and building a needs assessment and planning team, teaching clients how to perform needs assessment				●			●		
Conducting group problem-solving activities at district or building level									

PRIORITY TRAINING NEEDS OF LINKING AGENTS

INFORMATION COLLECTING AND ORGANIZING SKILLS	Frequency of Performance			Criticality for Effectiveness			Improvement of Our Staff		
	HIGH	MEDIUM	LOW	HIGH	MEDIUM	LOW	HIGH	MEDIUM	LOW
Dealing with information overload, system noise		●							
Formulating clear, concise needs/problems statements and retrieval requests; helping LEAs request information in searchable form	●			●			●		
Retrieving documents and materials from source and delivering them									●
Knowing users' preferred formats for print information (avoiding technicality, "ERIC," "journalese," etc.)		●						●	
Contacting experts/specialists for additional information, guidelines, and help									●
Knowing where demonstrations and materials may be seen (visitor sites, actual use -- not printed descriptions)								●	
Acquiring information regarding concepts/curricula in use								●	
Assisting local staff in obtaining information about R&D outcomes which may be relevant to their defined need or problem									
Clarifying vague requests	●			●					
Helping teachers become aware of information resources (training them in use of resources)	●								

ANALYZING INFORMATION SKILLS	Frequency of Performance			Criticality for Effectiveness			Improvement of Our Staff		
	HIGH	MEDIUM	LOW	HIGH	MEDIUM	LOW	HIGH	MEDIUM	LOW
Recognizing differences between knowledge-based and non-knowledge-based options		●			●				
Analyzing existing resource materials				●					
Bringing together people to work jointly on innovative projects (merging requests)					●			●	
Examining documents for omissions			●		●				
Deriving implications for practice from research-based information									
Estimating realistic per-pupil costs of adopting an innovation		●			●				●
Helping clients clarify ESEA Title I, IV-C, and other application and regulation procedures		●			●			●	
Helping clients use synthesized information	●								
Reviewing materials/ideas with clients					●			●	
Scanning and underlining important aspects of materials		●			●				

PRIORITY TRAINING NEEDS OF LINKING AGENTS

PLANNING SKILLS	Frequency of Performance			Criticality for Effectiveness			Improvement of Our Staff		
	HIGH	MEDIUM	LOW	HIGH	MEDIUM	LOW	HIGH	MEDIUM	LOW
Adapting diffusion strategy to particular target audiences (market segmentation, product differentiation, social marketing research, etc.)		●						●	
Helping clients with adoption plans/proposals for funding	●			●					
Selecting among various intervention modes		●						●	
Organizing own efforts and ideas	●			●				●	
Helping clients select appropriate solutions from available knowledge	●			●					
Identifying priority needs for technical services	●								
Furnishing/helping generate alternative solutions	●			●					
Managing delivery of resources/services		●			●				
Knowing when to say "no"								●	
Setting priorities for own work/budgeting own time								●	

PRIORITY TRAINING NEEDS OF LINKING AGENTS

	Frequency of Performance			Criticality for Effectiveness			Improvement of Our Staff		
PRODUCING SKILLS	HIGH	MEDIUM	LOW	HIGH	MEDIUM	LOW	HIGH	MEDIUM	LOW
Helping change teacher attitudes									
Encouraging educators with similar needs/problems to meet together and work out strategies				●					●
Arranging, organizing, and conducting workshops/meetings	●			●					
Knowing how to provide (or find) technical assistance (in implementation, staff development, packaging, public information, etc.)				●				●	
Developing group decision-making skills	●			●					
Conducting a brainstorming session									
Working across bureau/division/program lines in own organization (e.g., regional office, state education agency)									
Stimulating interest in educational improvement and environment for change	●			●					
Planning and managing a workshop		●			●			●	
Gaining acceptance for linking program; gaining interest and confidence of school personnel				●				●	

PRIORITY TRAINING NEEDS OF LINKING AGENTS

EVALUATING SKILLS	Frequency of Performance			Criticality for Effectiveness			Improvement of Our Staff		
	HIGH	MEDIUM	LOW	HIGH	MEDIUM	LOW	HIGH	MEDIUM	LOW
Locating and arranging for evaluation assistance as necessary	●			●					
Interviewing (face-to-face or telephone) site participants to obtain information on their attitudes, interests, activities, reaction to, or evaluation of the project		●			●			●	
Evaluating program impact				●			●		
Collecting data on product effectiveness, user satisfaction, and adaptations				●					
Documenting the process of installation including description of problems and successes	●			●					
Assisting school districts to monitor periodically and to evaluate the ongoing work at local sites to determine that the installation plan is being followed and is effective		●		●				●	
Recognizing virtues/limitations of current evaluation/validation procedures				●				●	
Evaluating dissemination impact (cost/benefit analysis)		●			●			●	
Assessing feasibility/effectiveness of various alternatives		●						●	
Evaluating one's services, impact, activities								●	

DISSEMINATION & MARKETING SKILLS	Frequency of Performance			Criticality for Effectiveness			Improvement of Our Staff		
	HIGH	MEDIUM	LOW	HIGH	MEDIUM	LOW	HIGH	MEDIUM	LOW
Assisting local site in developing plans for disseminating information about the project and in responding to requests for information		●			●			●	
Finding and reaching target audiences; devising publicity strategies to reach all clients		▬	▬		●			▬	▬
Working with existing diffusion systems	▬	▬		▬	▬			●	
Locating and encouraging other sources of diffusion help--e.g., funding agencies, resource/service centers, networks, colleges, private consultants, trainers, evaluators, Product Information Packages, teacher and learning centers, teacher organizations, administrator organizations, professional associations, etc	▬	▬		▬	▬			●	
Working knowledgeably with state/local textbook/materials adoption (bidding) procedures--state and local selection, procurement, purchasing--allocations/procedures, regulations	▬	▬	▬	▬	▬	▬		▬	▬
Comparing/contrasting costs of alternative dissemination strategies		●			●		▬	▬	▬
Training dissemination/liaison personnel in client systems		▬	▬	▬	▬		▬	▬	
Obtaining information on local norms (commonly held beliefs, attitudes, behaviors)		●			●			●	
Clustering clients for service		●			●			●	
Using newsletters as a dissemination mechanism (submitting useful items breezily written, helping to distribute, obtaining feedback, etc.)			●	▬	▬			▬	▬

PRIORITY TRAINING NEEDS OF LINKING AGENTS

COMMUNICATING SKILLS	Frequency of Performance			Criticality for Effectiveness			Improvement of Our Staff		
	HIGH	MEDIUM	LOW	HIGH	MEDIUM	LOW	HIGH	MEDIUM	LOW
Dealing with communication breakdowns/unexpected obstacles		●		●					
Defining and explaining role and function, how to use services				●					
Building and maintaining communication among client systems, linker agency, and superordinate (external) dissemination sources	●			●					
Conducting effective demonstrations/briefings/show-and-tell; making informal presentations to school or community personnel		●							
Identifying and using group interaction and communication techniques to facilitate group involvement		●						●	
Explaining materials and their nature to clients									●
Establishing friendly working relations with clients at every level	●			●					
Developing two-way communication channels	●			●					
Listening actively/asking nonjudgmental questions	●			●					
Synthesizing/summarizing	●			●					

PRIORITY TRAINING NEEDS OF LINKING AGENTS

IMPLEMENTING SKILLS	Frequency of Performance			Criticality for Effectiveness			Improvement of Our Staff		
	HIGH	MEDIUM	LOW	HIGH	MEDIUM	LOW	HIGH	MEDIUM	LOW
"Trouble shooting" problems that may develop at school sites during planning or implementation stages	▬	▬		●			▬	▬	
Assisting school districts in developing plans to institutionalize the improvements being achieved through the utilization project	▬	▬	▬	▬	▬		●		
Helping to gain support for change	▬	▬		●			▬	▬	
Adapting workshops to specific needs or selected practitioners (readiness, previous experience, etc.)	▬	▬		●			▬	▬	▬
Working with adoption committees	▬	▬	▬	●				▬	▬
Providing expertise needed to install selected R&D outcomes by developing additional linkages with state department consultants, R&D organizations, universities, etc., as may be appropriate	●			●				●	
Helping plan appropriate orientation and/or training for staff, citizens, and students who will be affected by the change	●			▬	▬			●	
Helping clients locate Federal/state/foundation/other supplementary sources to install new programs	▬	▬		▬	▬			●	
Helping clients organize effective inservice training	●			▬	▬			▬	▬
Helping to build implementation plans	●			▬	▬			●	

INSTRUMENT #13

Capla Associates, Technical Assistance Brokerage (TAB) contractor for the National Diffusion Network (NDN). Skills Identification. Rochelle Park, NJ: Capla Associates, Inc., 1977.

This set of skills clusters is reproduced by courtesy of the National Diffusion Network's (NDN) Technical Assistance Brokerage contractor, Capla Associates. The categories and items form an identification questionnaire covering specific skill needs and experience of linking agents participating in the NDN's nationwide activities. Selected portions of this form may prove useful to managers of other types of dissemination projects. For further information about the NDN, write the Division of Educational Replication, U.S. Office of Education, ROB 3, 400 Maryland Avenue S.W., Washington, DC 20202.

Summary of Instructions for Completing Form

Columns 1-5 - Place an X in the one box you think applies most.
Column 6 - Place a 0, 1, 2, 3 or 4 based on your need for assistance.
Column 7 - Place a 0, 1, 2, 3 or 4 based on your experience in the skill.
Column 8 - Place an X in the box if you are willing to share your experience with others.
Column 9 - Rate yourself by placing a 0, 1, 2, 3 or 4 in the box based on your experience in providing assistance in the skill.

Columns 1-5 Stages of Dissemination						6	7	8	9	
Spread	Exchange	Choice	Implementation	Project Mgmt.		Need Level 0-4	Experience Level 0-4	Willingness to provide Technical Assistance	Experience in providing Technical Assistance 0-4	
										I. Communication/Interpersonal Relationships
										A. Synthesizing and summarizing complex material
										B. Writing letters/memos
										C. Using the telephone for ongoing communications
										D. Developing two-way communication channels
										E. Communication breakdowns (diagnosis and resolution)
										F. Oral presentation skills (making the case and defining the project's role)

G. Analyzing audiences (communicating with different audiences)

H. Facilitating group interactions

I. Demonstrating materials

J. Organizing and conducting observations (selective listening)

K. Using persuasion

L. Coping with conflict (dealing with colleagues)

M. Preparing written material for selected target audiences (e.g., parents, teachers, administrators, legislators)

N. Communicating with other "linkers" through meetings, conferences, mail, and telephone

O. Communicating responses (feedback, delivery, and timing)

P. Organizing information needs

Q. Using the media

R. Updating and modifying materials based on experience

II. Public Relations and Marketing

A. Devising nationwide publicity strategies

B. Publicizing activities and results in client districts

C. Identifying and informing "significant others" in decision-making positions

D. Developing and updating mailing lists

E. Packaging materials for different audiences

F. Preparing audio-visual presentations

G. Achieving visibility
H. Using brochures and newsletters effectively
I. Developing tactics of boundary spanning
J. Analyzing and using incentives

III. Organization/Planning
A. Arranging and organizing workshops
B. Targeting information to maximize gains
C. Arranging site visits
D. Managing the delivery of resources and services
E. Implementing a program in an adopting district.
F. Setting goals and objectives and developing work plans
G. Prioritizing activities
H. Prioritzing client needs
I. Operationalizing the project
J. Modifying the program plan
K. Charting activities (flows, PERTs, and Gantts)
L. Adoption contracting
M. Adapting the project to meet local needs
N. Developing a general project approach to dissemination tasks

O. Arranging ongoing assistance to adopter sites

P. Analyzing the organization of the client system

IV. Evaluation/Documentation

A. Measuring the effectiveness of a workshop and presentation

B. Determining the relative merits of different programs

C. Preparing project evaluation design

D. Assisting school districts in monitoring program effectiveness

E. Monitoring adoption sites

F. Evaluating second generation trainers

G. Preparing an adoption case history

H. Using and supporting longitudinal data

I. Preparing and communicating statistical data

J. Standardizing recording procedures

K. Validating adoption sites that will serve as D/Ds

L. Implementing evaluation designs

M. Using evaluation data to modify programs, strategies, materials, and subsequent evaluations

N. Identifying exemplary adoptions

O. Assisting the client build a capacity for evaluation

V. Problem Solving/Diagnosis

- A. Probing for hidden agendas
- B. Conducting formal needs assessments (questionnaire development, data analysis, drawing conclusions)
- C. Conducting informal needs analysis (reviewing available data, situational analysis, drawing conclusions)
- D. Matching programs to district needs
- E. Learning client systems (norms, rules, constraints, and leaders)
- F. Assessing client motivations and capacity for change
- G. Clarifying and achieving consensus on client problems
- H. Identifying key people for decision points
- I. Troubleshooting and educational bureaucracy
- J. Brainstorming problems with clients
- K. Avoiding project stagnation
- L. Solving problems within the NDN
- M. Finding available financial resources to support project adoptions
- N. Using consultants to solve problems
- O. Assisting the client to build a problem-solving capacity

VI. Resource Acquisition/Utilization

- A. Contacting out-of-state agencies
- B. Contacting experts for additional information

C. Acquiring information regarding concepts, curriculum, and research

D. Obtaining information on rules, policies, and procedures at the local, state, and federal level

E. Discovering alternative funding sources

F. Identifying and accessing related sources of support (universities, funding institutions, resource service center, regional labs, private consultants, teacher organizations, administrator organizations, and professional groups)

G. Working with State Facilitators

H. Working with Developer/Demonstrators

I. Identifying related commercial and non-commercial educational materials

J. Understanding the conceptual framework of dissemination

K. Knowing the literature of planned change

VII. Management/Implementation

A. Understanding the historical context of NDN

B. Understanding the political context of NDN and its relationship to other dissemination networks and projects

C. Creating a psychological support system for project staff and client staff

D. Maintaining relationships with key agencies and resource centers

E. Organizational development and maintenance

F. Knowledge of federal and state statutes and guidelines related to programs

G. Sensing and monitoring local, state, and federal priorities

H. Techniques for cash flow (collection and payment procedures)

I. Budgeting methods (zero-based, cost accounting, PPBS)

J. Project accounting and state and federal audit procedures

K. Use of grant-related income

L. Copyright laws affecting the project

M. Writing and analyzing contracts

N. Setting up a consortium of adopters

O. Establishing filing and record keeping systems

P. Identifying and training turn-key trainers

Q. Establishing turn-key demonstration sites

R. Managing time and money

S. Managing change in large districts

T. Establishing an advisory council

U. Changing the project perspective from local to national

V. Selecting and training personnel

W. Developing client proposal-writing skills

X. Using parental and community input

Y. Writing and utilizing reports

Z. Developing interpersonal skills in oneself and others